

This PDF contains the contents of folders and files from the directory 'AI-Automation' and its subdirectories.

createdoc.sh (AI-Automation\documentation\create_code_doc\createdoc.sh):

```
#!/bin/bash
```

```
set +x
```

```
# Setting some required variables
```

```
BITO_CMD=`which bito`
```

```
BITO_CMD_VEP=""
```

```
BITO_VERSION=`$BITO_CMD -v | awk '{print $NF}'`
```

```
# Compare BITO_VERSION to check if its greater than 3.7
```

```
if awk "BEGIN {exit !($BITO_VERSION > 3.7)}"; then
```

```
    BITO_CMD_VEP="--agent create_code_doc"
```

```
fi
```

```
# Check if folder name is provided as command line argument
```

```
if [ $# -eq 0 ]; then
```

```
    echo "Please provide folder name as command line argument"
```

```
    exit 1
```

```
fi
```

```
# Get folder name from command line argument
```

```
folder=$1
```

```
# Check if folder exists
```

```
if [ ! -d "$folder" ]; then

    echo "Folder $folder does not exist"

    exit 1

fi

# Create document folder by prepending "doc" to folder name

doc_folder="doc_$(basename $folder)"

# Create document folder if it does not exist

if [ ! -d "$doc_folder" ]; then

    mkdir -p "$doc_folder"

fi

# Create documentation for each file in folder and subfolders

find "$folder" -type f -name "*.sh" -o -name "*.py" -o -name "*.php" -o -name "*.js" | while read file; do

    # Get relative path of file from folder

    rel_path="${file#$folder/}"

    # Get directory path of file in document folder

    doc_dir="$doc_folder/$(dirname "$rel_path")"

    # Create directory if it does not exist

    if [ ! -d "$doc_dir" ]; then

        mkdir -p "$doc_dir"

    fi
```

Create documentation using bito and save it in document folder

file2write="\$doc_dir/\$(basename "\${file%.*}").md"

echo "Creating documentation in: " \$file2write

The below command does not work and gives following error

Only "-p" flag is applicable for this command. Remove any additional flags and then try again.

bito -p docprmt.txt -f "\$file" >> "\$file2write"

cat \$file | bito -p ./prompts/structured_doc.txt \$BITO_CMD_VEP > \$file2write

done

echo "Documentation created in \$doc_folder"

docprmt.txt (AI-Automation\documentation\create_code_doc\docprmt.txt):

Generate documentation in brief in MD format for the code below, include details how to run code if required and document it

according to the language standards of the language in which code is written:

structured_doc.txt (AI-Automation\documentation\create_code_doc\prompts\structured_doc.txt):

Given below are Code Documentation Guidelines:

To ensure that the code is easily understandable and can be used seamlessly by all stakeholders, follow the guidelines below to

document the various elements in the code file and the format used is Markdown format

-Where required information is available provide header comments:

--Provide a brief overview of the purpose of the code file.

--Note any dependencies or external libraries used.

-Class/Module Documentation if applicable:

--Describe the purpose of each class or module.

--If the class or module is part of a larger system or library, describe its role within that system.

--List any key methods, attributes, or functionalities provided by the class or module.

-Function/Method Documentation if applicable:

--Provide a brief summary of what the function or method does.

--Document each parameter: its type, purpose, and any default values.

--Mention any return values, their types, and what they represent.

--Note any exceptions the function/method might raise and under what conditions.

-Code Block Comments:

--For complex or non-intuitive blocks of code, provide comments explaining the logic and flow.

--If using any algorithms or techniques that are not straightforward, provide references or brief explanations.

--Whenever possible, provide small snippets of how to use the function, class, or module.

This is particularly helpful for libraries or tools meant to be used by other developers.

-Edge Cases and Assumptions:

--Note any assumptions the code makes (e.g., input data will always be in a certain format).

--Describe how the code behaves under edge cases or unexpected inputs.

--If the code is based on a research paper, external libraries, or online resources, provide links or references to those resources.

-End-user Documentation (if applicable):

--When documenting, aim for clarity, brevity, and completeness. Remember, the primary goal is to make the code as understandable and usable as possible for anyone who encounters it in the future.

Using the guidelines above create documentation for code provided below without mentioning any of the guidelines above in documentation and only include required sections in documentation, never have empty sections:

README.md (AI-Automation\documentation\create_code_doc\README.md):

Code Documentation

Description

This script is used to generate documentation for files in a specified folder and its subfolders. It creates a document folder and copies the directory structure from the original folder to the document folder. Then, it creates documentation for each file in the specified folder and saves it in the corresponding location within the document folder.

Video explanation

<https://github.com/gitbito/AI-Automation/assets/57731668/0d85a531-35b4-44ef-9855-f44ac0e0cd63>

Usage

```
```bash
```

```
./createdoc.sh [folder_name]
```

```
```
```

Prerequisites

- Bit tool must be installed and accessible in the system. Available here: <https://github.com/gitbito/CLI>

Parameters

- `folder_name`: The name of the folder for which documentation needs to be generated.

```
## Code
```

```
```bash
```

```
#!/bin/bash
```

```
set -x
```

```
Check if folder name is provided as command line argument
```

```
if [$# -eq 0]; then
```

```
 echo "Please provide folder name as command line argument"
```

```
 exit 1
```

```
fi
```

```
Get folder name from command line argument
```

```
folder=$1
```

```
Check if folder exists
```

```
if [! -d "$folder"]; then
```

```
 echo "Folder $folder does not exist"
```

```
 exit 1
```

```
fi
```

```
Create document folder by prepending "doc" to folder name
```

```
doc_folder="doc_$folder"
```

```
Create document folder if it does not exist
```

```
if [! -d "$doc_folder"]; then
```

```

mkdir "$doc_folder"

fi

Copy directory structure to document folder

find "$folder" -type d -exec sh -c 'mkdir "$0" {} "$doc_folder"/{} \;'

Create documentation for each file in folder and subfolders

find "$folder" -type f -name "*.sh" -o -name "*.py" -o -name "*.php" -o -name "*.js" | while read file; do

 # Get relative path of file from folder

 rel_path="${file#$folder/}"

 # Get directory path of file in document folder

 doc_dir="$doc_folder/${dirname "$rel_path"}"

 # Create directory if it does not exist

 if [! -d "$doc_dir"]; then

 mkdir "$doc_dir"

 fi

 # Create documentation using bito and save it in document folder

 file2write="$doc_dir/${basename "${file%.*}").md"

 echo $file2write

 # The below command does not work and gives following error

 # Only "-p" flag is applicable for this command. Remove any additional flags and then try again.

 # bito -p docprmt.txt -f "$file" >> "$file2write"

 cat $file | bito -p docprmt.txt > $file2write

```

done

```
echo "Documentation created in $doc_folder"
```

```
...
```

## ## How to Run

1. Open a terminal.
2. Navigate to the directory where the script is located.
3. Run the following command:

```
``bash
```

```
./createdoc.sh [folder_name]
```

```
...
```

Replace `[folder\_name]` with the name of the folder for which documentation needs to be generated.

## ## Notes

- Make sure to have the `docprmt.txt` file in the same directory as the script. This file contains the documentation template used by the `bito` tool.
- The script supports documentation generation for files with extensions `.sh`, `.py`, `.php`, and `.js` only. Modify the `find` command in the script to include additional file extensions if needed.

fix\_mermaid\_syntax\_prompt.txt (AI-Automation\documentation\create\_overview\_doc\AI\_Prompts\fix\_mermaid\_syntax\_prompt.txt):

## # Mermaid Flowchart Syntax Cheat Sheet

This cheat sheet provides a concise reference for the syntax used in Mermaid flowcharts. Mermaid flowcharts enable the creation of complex diagrams using simple text-based language.



## ## Basic Structure

- **Nodes**: Represented by geometric shapes.
- **Edges**: Arrows or lines connecting nodes.

## ## Syntax for Nodes

### 1. **Standard Node**: ``id``

```
```mermaid
```

```
flowchart LR
```

```
id
```

```
...
```

2. **Node with Text**: ``id1[Text]``

```
```mermaid
```

```
flowchart LR
```

```
id1[This is text]
```

```
...
```

### 3. **Node Shapes**:

- **Round Edges**: ``id1(Text)``
- **Stadium Shape**: ``id1([Text])``
- **Subroutine Shape**: ``id1[[Text]]``

- **Cylindrical**: ``id1[(Text)]``
- **Circle**: ``id1((Text))``
- **Asymmetric**: ``id1>This is text``
- **Rhombus**: ``id1{Text}``
- **Hexagon**: ``id1{{Text}}``
- **Parallelogram**: ``id1[/Text/]`
- **Alternate Parallelogram**: ``id1[\Text\]`
- **Trapezoid**: ``id1[/Text\]`
- **Alternate Trapezoid**: ``id1[\Text/]`
- **Double Circle**: ``id1(((Text)))``

## ## Syntax for Edges

1. **Standard Arrow**: ``A --> B``
2. **Open Link**: ``A --- B``
3. **Text on Links**: ``A -- Text --> B`` or ``A ---|Text|B``
4. **Dotted Link**: ``A -. -> B``
5. **Dotted Link with Text**: ``A -. Text .-> B``
6. **Thick Link**: ``A ==> B``
7. **Thick Link with Text**: ``A == Text ==> B``
8. **Invisible Link**: ``A ~~~ B``
9. **Chaining of Links**: ``A -- text --> B -- text2 --> C``
10. **Multi Directional Arrows**: ``A <--> B``, ``A o--o B``, ``A x--x B``

## ## Special Characters and Unicode

- Enclose troublesome characters or Unicode text in quotes: ``id1["Text (with special characters)"]``

## ## Subgraphs

- Basic structure:

```
...
```

```
subgraph title
```

```
 node definitions
```

```
end
```

```
...
```

## ## Styling

- **Styling Nodes and Edges**: Use ``style`` keyword.
- **Classes**: Define with ``classDef`` and apply with ``class`` or ``:::`` operator.
- **CSS Classes**: Define in HTML and apply in Mermaid.
- **Default Class**: Applies to all unstyled elements.

## ## Interaction and Comments

- **Interactive Elements**: Use ``click`` keyword for binding events.
- **Comments**: Preface with ``%%`` to ignore in rendering.

## ## Configuration

- **Renderer**: ``%%{init: {"flowchart": {"defaultRenderer": "elk"}} }%%``

- **Width**: Adjust with `mermaid.flowchartConfig = { width: '100%' }`

## ## Example Usage

Given your example, here's the breakdown:

```
```mermaid
```

```
flowchart LR
```

```
    A[PostgresStorageConnector] -- insert --> B((Database))
```

```
    A -- get --> B
```

```
    A -- delete --> B
```

```
    A -- query --> B
```

```
    A -- get_all --> B
```

```
    C[LanceDBConnector] -- insert --> B
```

```
    C -- get --> B
```

```
    C -- delete --> B()
```

```
    C -- query --> B
```

```
    C -- get_all --> B
```

```
```
```

- `A[PostgresStorageConnector]` and `C[LanceDBConnector]`: Nodes with text.

- `B((Database))`: Circle node with text.

- `-- insert -->`: Arrow with text.

- `-- get -->`, `-- delete -->`, `-- query -->`, `-- get_all -->`: Standard arrows.

This syntax is valid in Mermaid and will create a flowchart with nodes and directed edges as described.

Correct the syntax errors in the following Mermaid flowchart:

```
```mermaid
```

high_level_doc_prompt.txt (AI-Automation\documentation\create_overview_doc\AI_Prompts\high_level_doc_prompt.txt):

Based on the provided code module, generate a comprehensive analysis as follows:

- **Module Name**: Identify the module.
- **Primary Objectives**: Define its purpose.
- **Critical Functions**: List main methods/functions and their roles.
- **Key Variables**: Point out essential variables.
- **Interdependencies**: Note interactions with other system components.
- **Core vs. Auxiliary Operations**: Differentiate main operations from auxiliary ones.
- **Operational Sequence**: Describe any distinct flow.
- **Performance Aspects**: Mention performance considerations.
- **Reusability**: Talk about adaptability for reuse.
- **Usage**: Discuss how it is used.
- **Assumptions**: List any assumptions made.

mermaid_doc_prompt.txt (AI-Automation\documentation\create_overview_doc\AI_Prompts\mermaid_doc_prompt.txt):

Create a basic level-1 Data Flow Diagram (DFD) in Mermaid js syntax. Do not include parameters in function calls.

system_introduction_prompt.txt (AI-Automation\documentation\create_overview_doc\AI_Prompts\system_introduction_prompt.txt):

Give a brief high level system overview and its purpose using the provided context for this program, keep it detailed, concise and confident.

system_overview_mermaid_update_prompt.txt

(AI-Automation\documentation\create_overview_doc\AI_Prompts\system_overview_mermaid_update_prompt.txt):

Integrate the provided individual Mermaid Markdown scripts to construct a simple system overview diagram.

Each script represents a component of the overall system.

The final output should be a unified, single Mermaid Markdown diagram that cohesively combines all components into a consolidated representation.

Ensure the result is enclosed within Mermaid Markdown code block delimiters and present it as a complete diagram in plain text.

createdoc.sh (AI-Automation\documentation\create_overview_doc\createdoc.sh):

```
#!/bin/bash
```

```
#set -x
```

```
# Setting some required variables
```

```
BITO_CMD=`which bito`
```

```
BITO_CMD_VEP=""
```

```
BITO_VERSION=`$BITO_CMD -v | awk '{print $NF}'`
```

```
# Compare BITO_VERSION to check if its greater than 3.7
```

```
if awk "BEGIN {exit !($BITO_VERSION > 3.7)}"; then
```

```
    BITO_CMD_VEP="--agent create_overview_doc"
```

```
fi
```

```
# Log file for storing the token usage information
```

```
log_file="bito_usage_log.txt"
```

```
# Directory containing prompt files for NLP tasks
```

```
prompt_folder="AI_Prompts"
```

```
# Global variables for session token counts
```

```
total_input_token_count=0
```

```
total_output_token_count=0
```

```
# CSV file with programming language extensions
```

```
lang_csv="programming_languages.csv"
```

```
# File containing skip list
```

```
skip_list_csv="skip_list.csv"
```

```
# Function to check if the response from bito is valid
```

```
# Checks both the return code and the response content
```

```
function bito_response_ok() {
```

```
    local ret_code=$1
```

```
    local response=$2
```

```
# Check if return code is non-zero
```

```
if [[ $ret_code -ne 0 ]]; then
```

```
    return 1 # Return non-zero status for error in return code
```

```
fi
```

```
# Check if response starts with "Whoops"
```

```
if [[ $response == Whoops* ]]; then
```

```
    return 1 # Return non-zero status for "Whoops" in response
```

```
fi
```

```
# Check if the response is empty
```

```
if [[ -z $response ]]; then
```

```
    return 1 # Return non-zero status for empty response
```

```
fi
```

```
return 0 # Return zero status for valid response
```

```
}
```

```
# Function to update token usage
```

```
function update_token_usage() {
```

```
    local input_tokens=$(echo "$1" | wc -w | awk '{print int($1 * 1.34)}')
```

```
    local output_tokens=$(echo "$2" | wc -w | awk '{print int($1 * 1.34)}')
```

```
    total_input_token_count=$((total_input_token_count + input_tokens))
```

```
    total_output_token_count=$((total_output_token_count + output_tokens))
```

```
}
```

```
# Function to log total token usage and session duration
```

```
function log_token_usage_and_session_duration() {
```

```
    local duration=$(( $(date +%s) - start_time ))
```

```
    echo "-----" | tee -a "$log_file"
```

```
    echo "$(date "+%Y-%m-%d %H:%M:%S") - Total Token Usage for Session" | tee -a "$log_file"
```

```
    echo "Total Input Tokens = $total_input_token_count" | tee -a "$log_file"
```

```
    echo "Total Output Tokens = $total_output_token_count" | tee -a "$log_file"
```

```
    echo "Session Duration: $((duration / 3600))h $(((duration % 3600) / 60))m $((duration % 60))s" | tee -a "$log_file"
```



```

echo "-----" | tee -a "$log_file"

}

# Function to check if required tools and files are present

function check_tools_and_files() {

    echo "Checking required tools and files for documentation generation..." >&2

    local required_tools=("bito" "mmdc")

    local required_files=("high_level_doc_prompt.txt" "mermaid_doc_prompt.txt" "system_introduction_prompt.txt"
"system_overview_mermaid_update_prompt.txt" "fix_mermaid_syntax_prompt.txt")

    # Check for missing tools

    for tool in "${required_tools[@]}; do

        if ! command -v "$tool" &> /dev/null; then

            echo -e "\nError: Tool $tool is required but not found."

            case "$tool" in

                "bito")

                    echo "  Install Bito CLI on MAC and Linux with:"

                    echo "  sudo curl https://alpha.bito.ai/downloads/cli/install.sh -fsSL | bash"

                    echo "  On Archlinux, install with yay or paru: yay -S bito-cli or paru -S bito-cli"

                    echo "  For Windows, download and install the MSI from Bito's website."

                    echo "  Follow the instructions provided by the installer."

                    ;;

                "mmdc")

                    echo "  Install Mermaid CLI with npm: npm install -g @mermaid-js/mermaid-cli"

                    ;;
            esac
        fi
    done
}

```

```

        esac

        exit 1

    fi

done

# Check for missing files

for file in "${required_files[@]"; do

    if [ ! -f "$prompt_folder/$file" ]; then

        echo -e "\nError: Missing required file: $prompt_folder/$file"

        exit 1

    fi

done

echo -e "All required tools and files are present. Proceeding...\n" >&2

}

```

```

# Function to read the skip list from the CSV file

```

```

function read_skip_list() {

    if [ -f "$skip_list_csv" ]; then

        skip_list=()

        while IFS=, read -r skip_item; do

            skip_list+=("$skip_item")

        done < "$skip_list_csv"

    else

        echo "Skip list file $skip_list_csv not found."

        exit 1
    fi
}

```

```

fi
}

# Function to check if a path should be skipped based on predefined patterns

function is_skippable() {

    local path=$1

    # List of directories/files to skip

    local skip_dirs_files=("logs" "node_modules" "dist" "target" "bin" "package-lock.json" "data.json" "build" ".gradle" ".idea" "gradle"
"extension.js" "vendor.js" "ngsw.json" "polyfills.js" "init" ".gv")

    for skip_item in "${skip_dirs_files[@]}; do

        if [[ "$path" == *"$skip_item"* ]]; then

            return 0

        fi

    done

    # Skip hidden files (files starting with a dot)

    if [[ $(basename "$path") == .* ]]; then

        return 0

    fi

    return 1

}

# Function to call the bito command with retry logic.

```

This function handles temporary failures by retrying the bito command a specified number of times.

```
function call_bito_with_retry() {
```

```
    local input_text=$1 # The input text to be sent to bito.
```

```
    local prompt_file_path=$2 # The path to the prompt file for bito.
```

```
    local attempt=1 # Initialize the attempt counter.
```

```
    local output # Variable to store the output from bito.
```

```
    local MAX_RETRIES=5 # Maximum number of retries.
```

```
    local RETRY_DELAY=10 # Delay in seconds between retries.
```

```
    # Extract the filename from the prompt file path for logging purposes.
```

```
    local filename=$(basename "$prompt_file_path")
```

```
    # Loop to attempt calling bito up to MAX_RETRIES times.
```

```
    while [ $attempt -le $MAX_RETRIES ]; do
```

```
        # Log the attempt number and the file being processed.
```

```
        echo "Calling bito with retry logic. Attempt $attempt of $MAX_RETRIES with prompt file '$filename'..." >&2
```

```
        # Call bito and capture the standard output only.
```

```
        output=$(echo -e "$input_text" | bito $BITO_CMD_VEP -p "$prompt_file_path")
```

```
        local ret_code=$? # Capture the return code from bito.
```

```
        # Check if the response from bito is valid using the bito_response_ok function.
```

```
        if ! bito_response_ok "$ret_code" "$output"; then
```

```
            # If the response is not valid, log the error and retry after a delay.
```

```
            echo "Attempt $attempt: bito call for file '$filename' completed but returned insufficient content. Retrying in $RETRY_DELAY  
seconds..." >&2
```

```

    sleep $RETRY_DELAY # Wait for RETRY_DELAY seconds before retrying.

    ((attempt++)) # Increment the attempt counter.

else

    # If the response is valid, log the success, output the result, and update token usage.

    echo "Attempt $attempt: Success! bito call for file '$filename' returned sufficient content." >&2

    echo "$output"

    update_token_usage "$input_text" "$output" # Update the token usage statistics.

    return 0 # Return successfully.

fi

done

# If all attempts fail, log an error message and return with an error status.

echo "All $MAX_RETRIES attempts to call bito with prompt file '$filename' have failed to return adequate content. Exiting with
error." >&2

return 1

}

# Generate documentation for an individual module

function create_module_documentation() {

    local path_to_module="$1"

    local documentation_directory="$2"

    echo "Creating documentation for module: $path_to_module" >&2

    if is_skippable "$path_to_module"; then

        echo "Skipped $path_to_module as it's on the exclusion list."

        return

```

fi

```
local name_of_module=$(basename "$path_to_module")
```

```
local content_of_module=$(<"$path_to_module")
```

```
local high_level_documentation
```

```
high_level_documentation=$(call_bitto_with_retry "Module: $name_of_module\n---\n$content_of_module"
```

```
"$prompt_folder/high_level_doc_prompt.txt")
```

```
local ret_code=$?
```

```
if ! bito_response_ok "$ret_code" "$high_level_documentation"; then
```

```
    echo "High-level documentation creation failed for module: $name_of_module"
```

```
    return 1
```

fi

```
update_token_usage "$content_of_module" "$high_level_documentation"
```

```
local mermaid_diagram=$(create_mermaid_diagram "$name_of_module" "$content_of_module")
```

```
if [ $? -ne 0 ]; then
```

```
    echo "Mermaid diagram creation failed for module: $name_of_module"
```

```
    return 1
```

fi

```
local mdd_file="$documentation_directory/$name_of_module.mdd"
```

```
if [ ! -s "$mdd_file" ]; then
```

```
    echo -e "$mermaid_diagram" > "$mdd_file"
```

fi

```
update_token_usage "$content_of_module" "$mermaid_diagram"
```

```

local markdown_documentation_file="$documentation_directory/${name_of_module}_Doc.md"

echo -e "## Module: $name_of_module\n$high_level_documentation" >> "$markdown_documentation_file"

if [[ -n "$mermaid_diagram" && "$mermaid_diagram" =~ [^[:space:]] ]]; then

    echo -e "## Flow Diagram [via mermaid]\n\\\`mermaid\n$mermaid_diagram\\\`" >> "$markdown_documentation_file"

fi

echo -e "Documentation saved to $markdown_documentation_file\n\n"

}

function extract_module_names_and_associated_objectives_then_call_bito() {

    local filename=$1

    local prompt_file_path=$2

    local lines=()

    local current_module=""

    local current_objectives=""

    local capture_objectives=false

    local combined_output=""

    local attempt=1

    local MAX_RETRIES=5

    local RETRY_DELAY=10 # seconds

    local bito_output

    echo -e "Extracting module names and objectives from file: $filename\n" >&2

    # Read the file line by line into the array

```

```

while IFS= read -r line; do

    lines+=("$line")

done < "$filename"


# Loop through the lines to process them

for line in "${lines[@]}"; do

    if [[ $line =~ ^##\ Module:\ (.*) ]]; then

        if [[ -n $current_module ]]; then

            echo "Processing module: $current_module with objectives" >&2

            combined_output+="Module: $current_module\n---\nPrimary Objectives:\n$current_objectives\n\n"

        fi

        current_module=${BASH_REMATCH[1]}

        current_objectives=""

        capture_objectives=false

    elif [[ $line =~ ^\ \*\*Primary\ Objectives\*\*: ]]; then

        capture_objectives=true

        current_objectives+=$(echo $line | sed 's/.\*\*\*Primary Objectives\*\*: //' )$'\n'

    elif $capture_objectives && [[ $line =~ ^\ .+ ]]; then

        current_objectives+=$(echo $line | sed 's/^\ \ //')$'\n'

    elif [[ $line == "## *" || $line == "" ]]; then

        capture_objectives=false

    fi

done


if [[ -n $current_module ]]; then

    echo "Processing module: $current_module with objectives" >&2

```



```

combined_output+="Module: $current_module\n---\nPrimary Objectives:\n$current_objectives\n\n"

fi

# Retry logic for calling bito

while [ $attempt -le $MAX_RETRIES ]; do

    echo "Attempt $attempt: Running bito for module: $current_module" >&2

    bito_output=$(echo -e "$combined_output" | bito $BITO_CMD_VEP -p "$prompt_file_path")

    local ret_code=$?

    if ! bito_response_ok "$ret_code" "$bito_output"; then

        echo "Attempt $attempt: bito command for module: $current_module failed or did not return enough content. Retrying in

$RETRY_DELAY seconds..." >&2

        sleep $RETRY_DELAY

        ((attempt++))

    else

        echo "Attempt $attempt: bito command for module: $current_module succeeded with sufficient content." >&2

        echo "$bito_output"

        update_token_usage "$combined_output" "$bito_output"

        return 0

    fi

done

echo "Failed to call bito for module: $current_module after $MAX_RETRIES attempts with adequate content." >&2

return 1

}

```

```

function fix_mermaid_syntax() {

    local mermaid_content="$1"

    local fixed_mermaid_content

    # Combine removal of empty parentheses and quotations in one step

    fixed_mermaid_content=$(echo "$mermaid_content" | sed 's/()/g; s/"//g')

    # Insert space between an opening square bracket '[' and a forward slash '/'

    fixed_mermaid_content=$(echo "$fixed_mermaid_content" | sed 's/\[/[ /g')

    # Adjust nested square brackets '['

    fixed_mermaid_content=$(echo "$fixed_mermaid_content" | sed 's/\([^\[\]]*\)\([^\[\]]*\)\]/[\1 \2]/g')

    echo "$fixed_mermaid_content"

}

```

Function to fix Mermaid diagram syntax using bito AI

```

function fix_mermaid_syntax_with_bito() {

    local fixed_mermaid_content

    fixed_mermaid_content=$(echo "$mermaid_content" | bito $BITO_CMD_VEP -p "$prompt_folder/mermaid_doc_prompt.txt" | awk

'/^```mermaid$/./^```$/{if (!/^```mermaid$/ && !/^```$/) print}')

    local ret_code=$?

    if ! bito_response_ok "$ret_code" "$fixed_mermaid_content"; then

        echo "Error in bito response for fixing mermaid syntax with bito."

        return 1
    }
}

```

```

fi

}

# Function to validate Mermaid diagram syntax

function validate_mermaid_syntax() {

    local mermaid_content="$1"

    local temp_mmd_file=$(mktemp)

    # Write Mermaid content to a temporary file

    echo "$mermaid_content" > "$temp_mmd_file"

    # Attempt to parse the Mermaid diagram using mmdc

    local output=$(mmdc -i "$temp_mmd_file" -o /dev/null 2>&1)

    local status=$?

    # Clean up the temporary file

    rm "$temp_mmd_file"

    if [ $status -ne 0 ]; then

        echo "Mermaid syntax validation failed. Please check the diagram syntax." >&2

        echo "$output" >&2

        return 1

    fi

    return 0

}

```

Wrapper function for Mermaid diagram validation and fixing

```

function fix_and_validate_mermaid() {

    local mermaid_content="$1"

```

```
# First, apply the syntax fix regardless of the initial validation

local fixed_mermaid_content

fixed_mermaid_content=$(fix_mermaid_syntax "$mermaid_content")


# Then, try to validate the fixed Mermaid content

if validate_mermaid_syntax "$fixed_mermaid_content"; then

    echo "Fixed Mermaid syntax is valid." >&2

    echo "$fixed_mermaid_content"

    return 0

else

    echo "Fixed Mermaid syntax is invalid. Attempting to fix with bito..." >&2


    # Attempt to fix the syntax using bito

    fixed_mermaid_content=$(fix_mermaid_syntax_with_bito "$fixed_mermaid_content")


    # Apply common fixes again after using bito

    fixed_mermaid_content=$(fix_mermaid_syntax "$fixed_mermaid_content")


    # Finally, validate the bito-fixed and re-fixed syntax

    if validate_mermaid_syntax "$fixed_mermaid_content"; then

        echo "Bito re-fixed Mermaid syntax and is valid." >&2

        echo "$fixed_mermaid_content"

        return 0

    else

        echo "Failed to fix Mermaid syntax even with bito and re-fixing." >&2

        return 1

    fi

fi
```

```

    fi

fi

}

# Generates Mermaid diagrams from a markdown file, replacing Mermaid code blocks with the generated diagrams.

function generate_mermaid_diagram() {

    local md_file="$1"

    # Strip the .md extension if present and then append it back to ensure correctness

    local md_file_base="${md_file%.md}"

    if command -v mmdc >/dev/null 2>&1; then

        echo "Generating Mermaid diagrams in markdown file..."

        # Overwrite the markdown file with the generated diagram references

        mmdc -i "${md_file_base}.md" -o "${md_file_base}.md" && echo "Mermaid diagrams updated in ${md_file_base}.md" || echo

        "Failed to update diagrams."

    else

        echo "Mermaid CLI not found; skipping diagram generation."

    fi

}

```

Generates Mermaid diagrams from a markdown file, replacing Mermaid code blocks with the generated diagrams.

Updated function with retry logic and bito response check

```

function create_mermaid_diagram() {

    local module_name="$1"

    local module_contents="$2"

    local mermaid_definition="flowchart\n$module_contents"

```

```
local mermaid_flow_map
```

```
local attempt=1
```

```
local MAX_RETRIES=10
```

```
local RETRY_DELAY=5 # seconds
```

```
local error_message=""
```

```
local bito_output
```

```
while [ $attempt -le $MAX_RETRIES ]; do
```

```
    echo "Attempt $attempt: Creating Mermaid diagram for module: $module_name" >&2
```

```
    bito_output=$(echo -e "Module: $module_name\n---\n$mermaid_definition" | bito $BITO_CMD_VEP -p
```

```
"$prompt_folder/mermaid_doc_prompt.txt")
```

```
    local ret_code=$?
```

```
    if ! bito_response_ok "$ret_code" "$bito_output"; then
```

```
        echo "Attempt $attempt: Bito call failed or returned insufficient content. Retrying in $RETRY_DELAY seconds..." >&2
```

```
        sleep $RETRY_DELAY
```

```
        ((attempt++))
```

```
    else
```

```
        mermaid_flow_map=$(echo "$bito_output" | awk '/^```mermaid$/ {if (!/^```mermaid$/ && !/^```$/) print}')
```

```
        mermaid_flow_map=$(fix_and_validate_mermaid "$mermaid_flow_map")
```

```
        local fix_and_validate_status=$?
```

```
        if [ $fix_and_validate_status -eq 0 ]; then
```

```
            echo "Mermaid diagram created successfully." >&2
```

```
            echo "$mermaid_flow_map"
```

```
            update_token_usage "$mermaid_definition" "$mermaid_flow_map"
```

```

        return 0

    else

        echo "Attempt $attempt: Failed to fix or validate Mermaid syntax. Retrying..." >&2

        sleep $RETRY_DELAY

        ((attempt++))

    fi

fi

done

echo "Failed to create Mermaid diagram for module: $module_name after $MAX_RETRIES attempts."

return 1

}

# Function to generate an overview.mdd file containing a Mermaid diagram of the full system by combining all .mdd files in the
provided directory and running bito on the combined content to generate a Mermaid diagram

function generate_mdd_overview() {

    local dir="$1"

    local mermaid_doc_prompt_file="$prompt_folder/system_overview_mermaid_update_prompt.txt"

    local overview_mdd_file="$dir/overview.mdd"

    local temp_file

    local MAX_RETRIES=5

    local RETRY_DELAY=5 # seconds

    echo "Starting to generate overview.mdd..."

    # Initialize variable to store the most recent valid Mermaid diagram

```

```
local latest_valid_mermaid_content=""
```

```
# Iterate over each .mdd file in the directory
```

```
for mdd_file in "$dir"/*.mdd; do
```

```
if [ -f "$mdd_file" ] && [ "$mdd_file" != "$overview_mdd_file" ]; then
```

```
    echo "Processing $mdd_file..."
```

```
    local mermaid_script=$(cat "$mdd_file")
```

```
    # Apply fix_and_validate_mermaid to each Mermaid script
```

```
    mermaid_script=$(fix_and_validate_mermaid "$mermaid_script")
```

```
    local fix_status=$?
```

```
    if [ $fix_status -ne 0 ]; then
```

```
        echo "Mermaid diagram fixing/validation failed for $mdd_file. Skipping..."
```

```
        continue
```

```
    fi
```

```
    echo "Mermaid script found. Processing with bito..."
```

```
    local attempt=1
```

```
    while [ $attempt -le $MAX_RETRIES ]; do
```

```
        echo "Attempt $attempt: Processing Mermaid script for $mdd_file" >&2
```

```
        # Use bito to process the Mermaid script
```

```
        temp_file=$(mktemp)
```

```
        echo -e "$mermaid_script" | bito $BITO_CMD_VEP -p "$mermaid_doc_prompt_file" > "$temp_file"
```

```
        # Validate the Mermaid script
```



```
if validate_mermaid_syntax "$(cat "$temp_file"); then
```

```
    echo -e "Valid Mermaid diagram generated successfully for $mdd_file.\n" >&2
```

```
    # Update the latest valid Mermaid content
```

```
    latest_valid_mermaid_content=$(cat "$temp_file")
```

```
    rm "$temp_file"
```

```
    # Delete the processed .mdd file
```

```
    rm "$mdd_file"
```

```
    update_token_usage "$mermaid_script" "$latest_valid_mermaid_content"
```

```
    break
```

```
else
```

```
    echo -e "Invalid Mermaid diagram syntax for attempt $attempt. Retrying...\n" >&2
```

```
    rm "$temp_file"
```

```
    sleep $RETRY_DELAY
```

```
    ((attempt++))
```

```
fi
```

```
done
```

```
if [ $attempt -gt $MAX_RETRIES ]; then
```

```
    echo "Failed to generate a valid Mermaid diagram for $mdd_file after $MAX_RETRIES attempts."
```

```
    return 1
```

```
fi
```

```
fi
```

```
done
```

```
# Check if there is valid Mermaid content
```

```
if [ -n "$latest_valid_mermaid_content" ]; then
```

```

# Save the latest valid Mermaid content to overview.mdd

echo -e "$latest_valid_mermaid_content" > "$overview_mdd_file"

echo "Mermaid overview generated successfully: $overview_mdd_file"

else

echo "Failed to create overview.mdd or no valid diagrams were found."

return 1

fi

}

# Function to read extensions from CSV and create the find command

function create_find_command() {

local lang_file="$1"

local folder_to_document="$2"

local find_command="find \"$folder_to_document\" -type f"

# Read each line from CSV and append it to the find command

while IFS= read -r ext; do

find_command="$find_command -o -name \"*.$ext\""

done < "$lang_file"

# Correct the find command by adding parentheses and removing the first '-o'

find_command="{find_command/-o /\( } \)"

echo "$find_command"

}

# Capture Start Time

```

```
start_time=$(date +%s)
```

```
function main() {
```

```
# Check if required tools and files are present
```

```
check_tools_and_files
```

```
# Check if a folder name is provided as an argument
```

```
if [ $# -eq 0 ]; then
```

```
    echo "Please provide a folder name as a command line argument"
```

```
    exit 1
```

```
fi
```

```
folder_to_document="$1"
```

```
docs_folder="doc_"$(basename "$folder_to_document")
```

```
# Check if the folder to document exists
```

```
if [ ! -d "$folder_to_document" ]; then
```

```
    echo "Folder $folder_to_document does not exist"
```

```
    exit 1
```

```
fi
```

```
# Create a directory for the generated documentation if it doesn't exist
```

```
if [ ! -d "$docs_folder" ]; then
```

```
    mkdir "$docs_folder"
```

```
fi
```

```
# Read the skip list from the CSV file
```

```
read_skip_list
```

```
# Define the path to the aggregated markdown file
```

```
aggregated_md_file="$docs_folder/High_Level_Doc.md"
```

```
# Clear existing aggregated markdown file if it exists
```

```
[ -f "$aggregated_md_file" ] && > "$aggregated_md_file"
```

```
# Use create_find_command to dynamically generate the find command with specified extensions
```

```
module_files=$(eval $(create_find_command "$lang_csv" "$folder_to_document"))
```

```
# Check if module_files is empty and display a warning if no files are found
```

```
[ -z "$module_files" ] && echo "Warning: No files found for documentation generation." && return
```

```
# Generate high-level documentation for each found module file
```

```
for module_file in $module_files; do
```

```
    # generate_individual_module_md "$module_file" "$docs_folder"
```

```
    create_module_documentation "$module_file" "$docs_folder"
```

```
done
```

```
# Aggregate individual markdown files into a main document
```

```
echo "# Module Overview" > "$aggregated_md_file"
```

```
for md_file in "$docs_folder"/*_Doc.md; do
```

```
    if [ "$md_file" != "$aggregated_md_file" ]; then
```

```
        cat "$md_file" >> "$aggregated_md_file"
```

fi

done

Extract content and call Bito for a system introduction and summary

local introduction_and_summary=\$(extract_module_names_and_associated_objectives_then_call_bito "\$aggregated_md_file"

"\$prompt_folder/system_introduction_prompt.txt")

Prepend the introduction and summary to the aggregated markdown file

Save the current content of the aggregated file temporarily

local temp_file=\$(mktemp)

mv "\$aggregated_md_file" "\$temp_file"

Create a new aggregated file starting with the Markdown-formatted introduction title

echo -e "# Introduction :\n" > "\$aggregated_md_file"

Append the introduction and summary

echo "\$introduction_and_summary" >> "\$aggregated_md_file"

Call generate_mdd_overview function here, after all .mdd files are created

generate_mdd_overview "\$docs_folder" "\$aggregated_md_file"

Append the content of overview.mdd to the aggregated file extracting only the Mermaid diagram block

if [-f "\$docs_folder/overview.mdd"]; then

echo -e "\n# Full System Overview\n" >> "\$aggregated_md_file"

Extract and append only the Mermaid diagram block

```

    awk '/^```mermaid$/,/```$/' "$docs_folder/overview.mdd" >> "$aggregated_md_file"

else

    echo "Overview file not found or empty."

fi

# Append the rest of the original aggregated content

cat "$temp_file" >> "$aggregated_md_file"

# Remove the temporary file

rm "$temp_file"

# Generate Mermaid diagrams for visual representations overwriting the markdown file with the diagrams

generate_mermaid_diagram "$aggregated_md_file"

# Log Session Duration and Total Token Usage to the log file

log_token_usage_and_session_duration

# Notify the user that the documentation has been generated

echo "Documentation generated in $docs_folder"

}

main "$@"

gesture_recognition.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\hobbyist\doc_Spotify-Gesture-Control-main\gesture_recognition.py_D
oc.md):

```

Module: gesture_recognition.py

- **Module Name**: gesture_recognition.py

- **Primary Objectives**: This module is designed to recognize hand gestures and perform various functions, such as adjusting the volume, playing or pausing songs, and navigating between songs in Spotify.

- **Critical Functions**:

- `start_capture()`: This is the main function in the module. It starts capturing video from the webcam, detects hand landmarks using the MediaPipe library, interprets the hand gestures, and performs the corresponding Spotify functions.

- **Key Variables**:

- `mp_hand_drawing`, `mp_hands`: Used for drawing hand landmarks and hand tracking.

- `mediaCap`: Captures video feed from the webcam.

- `max_distance`, `play_pause_active`, `next_prev_active`: Used for volume control and to avoid repeated play/pause and next/prev song actions.

- `finger_tip_ids`, `finger_count`, `finger_up`: Used to track the position and movement of fingers.

- `thumb_tip_x`, `thumb_tip_y`, `index_tip_x`, `index_tip_y`, `thumb_index_distance`: Used to calculate the distance between thumb and index finger for volume control.

- **Interdependencies**: This module interacts with the `mediapipe` library for hand tracking and the `spotify_functions` module for controlling Spotify.

- **Core vs. Auxiliary Operations**:

- Core operations include capturing video from the webcam, detecting hand landmarks, interpreting hand gestures, and performing corresponding Spotify functions.

- Auxiliary operations include drawing hand landmarks on the captured video and displaying the video with overlaid information.

- **Operational Sequence**: The module starts by capturing video from the webcam. It then processes each frame to detect hand landmarks. Based on the detected landmarks, it interprets the hand gestures and performs the corresponding Spotify functions. It also overlays the video with hand landmarks and other information before displaying it.
- **Performance Aspects**: The performance of this module largely depends on the accuracy of the hand tracking and gesture recognition, the responsiveness of the Spotify functions, and the processing speed of the video frames.
- **Reusability**: This module can be adapted for use with other applications that can be controlled through hand gestures. However, the gesture interpretation and the corresponding functions would need to be modified accordingly.
- **Usage**: This module is used to control Spotify through hand gestures. It can be run as a standalone script that starts when the user wants to control Spotify using hand gestures.
- **Assumptions**:
 - It assumes that the webcam is working properly and can capture video.
 - It assumes that the MediaPipe library can accurately track hand landmarks.
 - It assumes that the user's hand gestures follow the pre-defined patterns for the Spotify functions.

Mermaid Diagram

```mermaid

graph TD

A[Gesture Recognition] -->|Capture Frame| B[Hand Detection]

B --> C{Finger Count}

C --> D{Volume Control}

C --> E{Play Pause Gesture}

C --> F{Next Song Gesture}



C --> G{Previous Song Gesture}

D --> H[Adjust Volume]

E --> I[Play/Pause]

F --> J[Next Song]

G --> K[Previous Song]

...

High\_Level\_Doc-1.svg

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\High\_Level\_Doc-1.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 698.265625 386" style="max-width: 698.266px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
```

```
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,185L50.963541666666664,185C55.130208333333336,185,63.463541666666664,185,70.91354166666666,185C78.
36354166666666,185,84.93020833333334,185,88.21354166666667,185L91.496875,185"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M166.103515625,168L178.9326171875,142.83333333333334C191.76171875,117.66666666666667,217.419921875,67.33333333
```

3333333,237.14694010416667,42.166666666666664C256.87395833333335,17,270.66979166666664,17,277.5677083333333,17L2  
84.465625,17"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal  
edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"  
d="M174.76953125,168L186.154296875,156.83333333333334C197.5390625,145.66666666666666,220.30859375,123.3333333333  
3333,234.97669270833333,112.16666666666667C249.6447916666667,101,256.21145833333333,101,259.4947916666667,101L262  
.778125,101"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal  
edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0"  
d="M218.078125,185L222.24479166666666,185C226.41145833333334,185,234.74479166666666,185,244.31458333333333,185C  
253.884375,185,264.690625,185,270.09375,185L275.496875,185"/><path marker-end="url(#my-svg\_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-F" id="L-B-F-0"  
d="M174.76953125,202L186.154296875,213.16666666666666C197.5390625,224.33333333333334,220.30859375,246.6666666666  
6666,237.72408854166667,257.83333333333333C255.13958333333335,269,267.20104166666664,269,273.23177083333333,269L27  
9.2625,269"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid  
flowchart-link LS-B LE-G" id="L-B-G-0"  
d="M166.103515625,202L178.9326171875,227.16666666666666C191.76171875,252.33333333333334,217.419921875,302.666666  
6666667,236.29147135416667,327.83333333333333C255.16302083333335,353,267.24791666666664,353,273.29036458333333,353  
L279.3328125,353"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal  
edge-pattern-solid flowchart-link LS-C LE-H" id="L-C-H-0"  
d="M433.28125,17L441.0625,17C448.84375,17,464.40625,17,475.47083333333333,17C486.53541666666666,17,493.10208333333  
34,17,496.3854166666667,17L499.66875,17"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;"  
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-I" id="L-D-I-0"  
d="M454.96875,101L459.1354166666667,101C463.30208333333333,101,471.6354166666667,101,481.0072916666666,101C490.37  
916666666666,101,500.78958333333334,101,505.9947916666667,101L511.2,101"/><path  
marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E  
LE-J" id="L-E-J-0"  
d="M442.25,185L448.53645833333333,185C454.8229166666667,185,467.39583333333333,185,481.15052083333333,185C494.90520



transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g

transform="translate(23.3984375, 185)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="34"

width="46.796875" y="-17" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-15.8984375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="31.796875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(157.4375, 185)" id="flowchart-B-1"

class="node default default flowchart-label"><rect height="34" width="121.28125" y="-17" x="-60.640625" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-53.140625, -9.5)" style="" class="label"><rect/><foreignObject height="19"

width="106.28125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Spotipy Object</span></div></foreignObject></g></g><g transform="translate(361.5234375, 17)"

id="flowchart-C-3" class="node default default flowchart-label"><rect height="34" width="143.515625" y="-17" x="-71.7578125" ry="0"

rx="0" style="" class="basic label-container"/><g transform="translate(-64.2578125, -9.5)" style=""

class="label"><rect/><foreignObject height="19" width="128.515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">get\_user Function</span></div></foreignObject></g></g><g

transform="translate(361.5234375, 101)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="34"

width="186.890625" y="-17" x="-93.4453125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-85.9453125, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="171.890625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">adjust\_volume

Function</span></div></foreignObject></g></g><g transform="translate(361.5234375, 185)" id="flowchart-E-7" class="node default

default flowchart-label"><rect height="34" width="161.453125" y="-17" x="-80.7265625" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-73.2265625, -9.5)" style="" class="label"><rect/><foreignObject height="19"

width="146.453125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">play\_pause Function</span></div></foreignObject></g></g><g transform="translate(361.5234375, 269)"

id="flowchart-F-9" class="node default default flowchart-label"><rect height="34" width="153.921875" y="-17" x="-76.9609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.4609375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="138.921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">next\_song Function</span></div></foreignObject></g></g><g transform="translate(361.5234375, 353)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="34" width="153.78125" y="-17" x="-76.890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.390625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="138.78125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">prev\_song Function</span></div></foreignObject></g></g><g transform="translate(593.6171875, 17)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="34" width="177.296875" y="-17" x="-88.6484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-81.1484375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="162.296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">User Spotify Username</span></div></foreignObject></g></g><g transform="translate(593.6171875, 101)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="34" width="154.234375" y="-17" x="-77.1171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.6171875, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="139.234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Volume Adjustment</span></div></foreignObject></g></g><g transform="translate(593.6171875, 185)" id="flowchart-J-17" class="node default default flowchart-label"><rect height="34" width="127.078125" y="-17" x="-63.5390625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-56.0390625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="112.078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Playback Status</span></div></foreignObject></g></g><g transform="translate(593.6171875, 269)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="34" width="86.171875" y="-17" x="-43.0859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-35.5859375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="71.171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Next Song</span></div></foreignObject></g></g><g transform="translate(593.6171875, 353)"

```
id="flowchart-L-21" class="node default default flowchart-label"><rect height="34" width="112.203125" y="-17" x="-56.1015625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-48.6015625, -9.5)" style=""
class="label"><rect/><foreignObject height="19" width="97.203125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Previous
Song</div></foreignObject></g></g></g></g></svg>
```

High\_Level\_Doc-2.svg

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\High\_Level\_Doc-2.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 898.296875 684.5625"
style="max-width: 898.297px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
```

```
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M418.14453125,34L418.14453125,39.75C418.14453125,45.5,418.14453125,57,418.14453125,67.61666666666666C418.14453
125,78.23333333333333,418.14453125,87.96666666666665,418.14453125,92.83333333333333L418.14453125,97.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M418.14453125,137L418.14453125,141.16666666666666C418.14453125,145.33333333333334,418.14453125,153.66666666666
```



6666,418.21054765047455,161.20016975753654C418.27656405094916,168.73367284840646,418.40859685189827,175.4673456

968129,418.4746132523728,178.83418212101614L418.54062965284743,182.20101854521937"/><path

marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-D" id="L-C-D-0"

d="M363.8214376398292,273.1612813898292L316.4358334498576,286.3817969915243C269.0502292598861,299.602312593219

44,174.27902087994303,326.0433437966097,126.96783354804744,346.63577940144995C79.65664621615183,367.22821500629

016,79.80547993230364,381.9720550125803,79.87989679037956,389.3439750157254L79.95431364845547,396.7158950188704

7"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-C LE-E" id="L-C-E-0"

d="M379.98988715037626,289.32973090037626L366.92386429198024,299.85550491698024C353.85784143358416,310.3812789

3358416,327.7257957167921,331.4328269667921,314.730993910092,347.15217361253866C301.73619210339194,362.87152025

82853,301.87863420678394,373.2586655165705,301.9498552584799,378.4522381457131L302.0210763101759,383.6458107748

557"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-C LE-F" id="L-C-F-0"

d="M457.29917534962374,289.32973090037626L470.1985315413531,299.85550491698024C483.0978877330825,310.381278933

58416,508.89660011654126,331.4328269667921,521.8678234001686,347.4946129061686C534.839046683796,363.55639884554

495,534.9827808675922,374.62842269108995,535.0546479594902,380.1644346138625L535.1265150513883,385.700446536634

96"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-C LE-G" id="L-C-G-0"

d="M474.21097160885057,272.41793464114943L524.9687784240422,285.7623413676245C575.7265852392337,299.1067480940

996,677.2421988696168,325.79556154704983,728.066022085283,342.5068046977281C778.8898453009491,359.2180478484064

6,779.0218781018983,365.95172069681286,779.0878945023728,369.3185571210161L779.1539109028474,372.68539354521937"

/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-D LE-H" id="L-D-H-0"

d="M80.0078125,561.03125L79.92447916666667,569.1197916666666C79.84114583333333,577.2083333333334,79.67447916666

667,593.3854166666666,79.59114583333333,604.7572916666667C79.5078125,616.1291666666667,79.5078125,622.69583333333

[illegible]

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="nodes"><g transform="translate(418.14453125, 17)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="34" width="159.34375" y="-17" x="-79.671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-72.171875, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="144.34375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Gesture Recognition</span></div></foreignObject></g></g><g transform="translate(418.14453125, 120)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="34" width="126.125" y="-17" x="-63.0625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-55.5625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="111.125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Hand Detection</span></div></foreignObject></g></g><g transform="translate(418.14453125, 257.2421875)" id="flowchart-C-3" class="node default default flowchart-label"><polygon style="" transform="translate(-70.2421875,70.2421875)" class="label-container" points="70.2421875,0 140.484375,-70.2421875 70.2421875,-140.484375 0,-70.2421875"/><g transform="translate(-45.7421875, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="91.484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Finger Count</span></div></foreignObject></g></g><g transform="translate(79.5078125, 481.0234375)" id="flowchart-D-5" class="node default default flowchart-label"><polygon style="" transform="translate(-79.5078125,79.5078125)" class="label-container" points="79.5078125,0 159.015625,-79.5078125 79.5078125,-159.015625 0,-79.5078125"/><g transform="translate(-55.0078125, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="110.015625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Volume

Control</span></div></foreignObject></g></g><g transform="translate(301.59375, 481.0234375)" id="flowchart-E-7" class="node default default flowchart-label"><polygon style="" transform="translate(-92.578125,92.578125)" class="label-container" points="92.578125,0 185.15625,-92.578125 92.578125,-185.15625 0,-92.578125"/><g transform="translate(-68.078125, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="136.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Play Pause Gesture</span></div></foreignObject></g></g><g transform="translate(534.6953125, 481.0234375)" id="flowchart-F-9" class="node default default flowchart-label"><polygon style="" transform="translate(-90.5234375,90.5234375)" class="label-container" points="90.5234375,0 181.046875,-90.5234375 90.5234375,-181.046875 0,-90.5234375"/><g transform="translate(-66.0234375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="132.046875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Next Song Gesture</span></div></foreignObject></g></g><g transform="translate(778.7578125, 481.0234375)" id="flowchart-G-11" class="node default default flowchart-label"><polygon style="" transform="translate(-103.5390625,103.5390625)" class="label-container" points="103.5390625,0 207.078125,-103.5390625 103.5390625,-207.078125 0,-103.5390625"/><g transform="translate(-79.0390625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="158.078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Previous Song Gesture</span></div></foreignObject></g></g><g transform="translate(79.5078125, 651.5625)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="34" width="118.03125" y="-17" x="-59.015625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-51.515625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="103.03125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Adjust Volume</span></div></foreignObject></g></g><g transform="translate(301.59375, 651.5625)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="34" width="93.859375" y="-17" x="-46.9296875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-39.4296875, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="78.859375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Play/Pause</span></div></foreignObject></g></g><g transform="translate(534.6953125, 651.5625)" id="flowchart-J-17" class="node default default flowchart-label"><rect height="34" width="86.171875" y="-17" x="-43.0859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-35.5859375, -9.5)" style=""

```

class="label"><rect/><foreignObject height="19" width="71.171875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Next Song</div></foreignObject></g></g><g
transform="translate(778.7578125, 651.5625)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="34"
width="112.203125" y="-17" x="-56.1015625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-48.6015625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="97.203125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Previous
Song</div></foreignObject></g></g></g></g></g></svg>

```

High\_Level\_Doc-3.svg

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\High\_Level\_Doc-3.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 531.59375 189" style="max-width:
531.594px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

```

```

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M49.70402644230769,78L57.698667868589745,67.83333333333333C65.6933092948718,57.666666666666664,81.6825921474
359,37.333333333333336,92.96056690705127,27.166666666666668C104.23854166666666,17,110.80520833333333,17,114.0885
4166666667,17L117.371875,17"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"

```

d="M72.671875,110.40262386957076L76.83854166666667,112.1688532246423C81.00520833333333,113.93508257971384,89.33  
854166666667,117.46754128985692,98.42005208333335,119.23377064492847C107.50156249999999,121,117.33125,121,122.24  
609375,121L127.1609375,121"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;"  
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"  
d="M280.359375,17L284.5260416666667,17C288.69270833333333,17,297.0260416666667,17,307.11580428082004,18.309336653  
154155C317.2055668949734,19.61867330630831,329.05175878994686,22.23734661261662,334.9748547374336,23.5466832657  
7077L340.8979506849203,24.85601991892493"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;"  
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-E" id="L-C-E-0"  
d="M270.5703125,121L276.36848958333333,121C282.1666666666667,121,293.76302083333333,121,311.8419160596662,123.7147  
2799600814C329.92081128599904,126.42945599201626,354.48224757199813,131.85891198403252,366.76296571499773,134.5  
7363998004067L379.0436838579972,137.2883679760488"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;"  
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-A" id="L-E-A-0"  
d="M384.21875,155.56765194287613L371.07552083333333,158.4730432857301C357.9322916666667,161.37843462858407,331.6  
458333333333,167.18921731429205,301.1953125,170.09460865714604C270.7447916666667,173,236.13020833333334,173,201.  
515625,173C166.90104166666666,173,132.28645833333334,173,107.53054400357314,163.527697278267C82.77462967381295,  
154.055394556534,67.87738434762589,135.11078911306802,60.42876168453237,125.63848639133501L52.98013902143885,11  
6.16618366960202"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal  
edge-pattern-solid flowchart-link LS-D LE-A" id="L-D-A-0"  
d="M346.0730168269231,60L339.2874098557692,61.5C332.5018028846154,63,318.9305889423077,66,294.8376903044872,67.5  
C270.7447916666667,69,236.13020833333334,69,201.515625,69C166.90104166666666,69,132.28645833333334,69,111.6257821  
1300136,70.42148309700652C90.96510589266937,71.84296619401304,84.25833678533874,74.68593238802607,80.9049522316  
7342,76.10741548503259L77.55156767800811,77.5288985820391"/></g><g class="edgeLabels"><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g  
transform="translate(36.3359375, 95)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="34"  
width="72.671875" y="-17" x="-36.3359375" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-28.8359375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="57.671875"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">main.py</span></div></foreignObject></g></g><g transform="translate(201.515625, 17)" id="flowchart-B-1"  
class="node default default flowchart-label"><rect height="34" width="157.6875" y="-17" x="-78.84375" ry="0" rx="0" style=""  
class="basic label-container"/><g transform="translate(-71.34375, -9.5)" style="" class="label"><rect/><foreignObject height="19"  
width="142.6875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">gesture\_recognition</span></div></foreignObject></g></g><g transform="translate(201.515625, 121)"  
id="flowchart-C-3" class="node default default flowchart-label"><rect height="34" width="138.109375" y="-17" x="-69.0546875" ry="0"  
rx="0" style="" class="basic label-container"/><g transform="translate(-61.5546875, -9.5)" style=""  
class="label"><rect/><foreignObject height="19" width="123.109375"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">spotify\_functions</span></div></foreignObject></g></g><g  
transform="translate(422.9765625, 43)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="34"  
width="185.234375" y="-17" x="-92.6171875" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-85.1171875, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="170.234375"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Start Gesture  
Capturing</span></div></foreignObject></g></g><g transform="translate(422.9765625, 147)" id="flowchart-E-7" class="node default



```

default flowchart-label"><rect height="34" width="77.515625" y="-17" x="-38.7578125" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-31.2578125, -9.5)" style="" class="label"><rect/><foreignObject height="19"
width="62.515625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Get User</div></foreignObject></g></g></g></g></g></svg>

```

High\_Level\_Doc-4.svg

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\High\_Level\_Doc-4.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 698.265625 386" style="max-width:
698.266px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

```

```
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,185L50.963541666666664,185C55.130208333333336,185,63.463541666666664,185,70.91354166666666,185C78.
36354166666666,185,84.93020833333334,185,88.21354166666667,185L91.496875,185"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M166.103515625,168L178.9326171875,142.83333333333334C191.76171875,117.66666666666667,217.419921875,67.3333333
3333333,237.14694010416667,42.166666666666664C256.87395833333335,17,270.66979166666664,17,277.5677083333333,17L2
84.465625,17"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
```

edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M174.76953125,168L186.154296875,156.83333333333334C197.5390625,145.66666666666666,220.30859375,123.33333333333333,234.97669270833333,112.16666666666667C249.64479166666667,101,256.21145833333333,101,259.49479166666667,101L262.778125,101"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0"

d="M218.078125,185L222.24479166666666,185C226.41145833333334,185,234.74479166666666,185,244.31458333333333,185C253.884375,185,264.690625,185,270.09375,185L275.496875,185"/><path marker-end="url(#my-svg\_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-F" id="L-B-F-0"

d="M174.76953125,202L186.154296875,213.16666666666666C197.5390625,224.33333333333334,220.30859375,246.66666666666666,237.72408854166667,257.83333333333333C255.13958333333335,269,267.20104166666664,269,273.23177083333333,269L279.2625,269"/><path marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-G" id="L-B-G-0"

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class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-I" id="L-D-I-0"

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marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-J" id="L-E-J-0"

d="M442.25,185L448.53645833333333,185C454.82291666666667,185,467.39583333333333,185,481.15052083333333,185C494.90520833333335,185,509.84166666666667,185,517.30989583333334,185L524.778125,185"/><path

marker-end="url(#my-svg\_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F

LE-K" id="L-F-K-0"

d="M438.484375,269L445.3984375,269C452.3125,269,466.140625,269,483.9317708333333,269C501.72291666666666,269,523.4770833333333,269,534.3541666666666,269L545.23125,269"/><path marker-end="url(#my-svg\_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-L" id="L-G-L-0"

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transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

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transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

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transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

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xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

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transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g

transform="translate(23.3984375, 185)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="34"

width="46.796875" y="-17" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-15.8984375, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="31.796875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(157.4375, 185)" id="flowchart-B-1"

class="node default default flowchart-label"><rect height="34" width="121.28125" y="-17" x="-60.640625" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-53.140625, -9.5)" style="" class="label"><rect/><foreignObject height="19"

width="106.28125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Spotipy Object</span></div></foreignObject></g></g><g transform="translate(361.5234375, 17)"

id="flowchart-C-3" class="node default default flowchart-label"><rect height="34" width="143.515625" y="-17" x="-71.7578125" ry="0"

rx="0" style="" class="basic label-container"/><g transform="translate(-64.2578125, -9.5)" style=""

class="label"><rect/><foreignObject height="19" width="128.515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">get\_user Function</span></div></foreignObject></g></g><g

transform="translate(361.5234375, 101)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="34"

width="186.890625" y="-17" x="-93.4453125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-85.9453125, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="171.890625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">adjust\_volume

Function</span></div></foreignObject></g></g><g transform="translate(361.5234375, 185)" id="flowchart-E-7" class="node default

default flowchart-label"><rect height="34" width="161.453125" y="-17" x="-80.7265625" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-73.2265625, -9.5)" style="" class="label"><rect/><foreignObject height="19"

width="146.453125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">play\_pause Function</span></div></foreignObject></g></g><g transform="translate(361.5234375, 269)"

id="flowchart-F-9" class="node default default flowchart-label"><rect height="34" width="153.921875" y="-17" x="-76.9609375" ry="0"

rx="0" style="" class="basic label-container"/><g transform="translate(-69.4609375, -9.5)" style=""

class="label"><rect/><foreignObject height="19" width="138.921875"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">next\_song Function</span></div></foreignObject></g></g><g  
transform="translate(361.5234375, 353)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="34"  
width="153.78125" y="-17" x="-76.890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.390625,  
-9.5)" style="" class="label"><rect/><foreignObject height="19" width="138.78125"><div style="display: inline-block; white-space:  
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">prev\_song  
Function</span></div></foreignObject></g></g><g transform="translate(593.6171875, 17)" id="flowchart-H-13" class="node default  
default flowchart-label"><rect height="34" width="177.296875" y="-17" x="-88.6484375" ry="0" rx="0" style="" class="basic  
label-container"/><g transform="translate(-81.1484375, -9.5)" style="" class="label"><rect/><foreignObject height="19"  
width="162.296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">User Spotify Username</span></div></foreignObject></g></g><g transform="translate(593.6171875, 101)"  
id="flowchart-I-15" class="node default default flowchart-label"><rect height="34" width="154.234375" y="-17" x="-77.1171875" ry="0"  
rx="0" style="" class="basic label-container"/><g transform="translate(-69.6171875, -9.5)" style=""  
class="label"><rect/><foreignObject height="19" width="139.234375"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Volume Adjustment</span></div></foreignObject></g></g><g  
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width="127.078125" y="-17" x="-63.5390625" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-56.0390625, -9.5)" style="" class="label"><rect/><foreignObject height="19" width="112.078125"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Playback  
Status</span></div></foreignObject></g></g><g transform="translate(593.6171875, 269)" id="flowchart-K-19" class="node default  
default flowchart-label"><rect height="34" width="86.171875" y="-17" x="-43.0859375" ry="0" rx="0" style="" class="basic  
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width="71.171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">Next Song</span></div></foreignObject></g></g><g transform="translate(593.6171875, 353)"  
id="flowchart-L-21" class="node default default flowchart-label"><rect height="34" width="112.203125" y="-17" x="-56.1015625"  
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class="label"><rect/><foreignObject height="19" width="97.203125"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Previous  
Song</span></div></foreignObject></g></g></g></g></g></svg>

High\_Level\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\High\_Level\_Doc.md):

# Introduction :

The system is a comprehensive, user-friendly, and highly interactive program designed to provide a seamless gesture-controlled interface for Spotify. It is composed of several modules, each with a specific function, working in harmony to deliver a superior user experience.

The first module, `gesture_recognition.py`, is the heart of the system. It uses advanced algorithms to recognize a user's hand gestures.

The gestures can be used to perform a variety of functions, such as adjusting the volume, playing or pausing songs, and navigating between songs. This provides a hands-free and intuitive way for users to control their Spotify playback.

The second module, `main.py`, serves as the gateway to the system. It is responsible for authenticating the user and initiating the gesture control process. Once the user is authenticated, it captures the user's gestures and sends them to the `gesture_recognition.py` module for interpretation.

The third module, `spotify_functions.py`, is the bridge between the system and the Spotify API. It contains a set of functions that interact with the Spotify API to control the user's playback based on the interpreted gestures. These functions include adjusting the volume, playing or pausing music, skipping to the next song, and going back to the previous song.

In essence, this system is a blend of cutting-edge technology and user-centric design, aimed at enhancing the Spotify experience by introducing a novel, gesture-based control mechanism.

## # Full System Overview



## # Module Overview

## Module: gesture\_recognition.py

- **Module Name**: gesture\_recognition.py

- **Primary Objectives**: This module is designed to recognize hand gestures and perform various functions, such as adjusting the volume, playing or pausing songs, and navigating between songs in Spotify.

- **Critical Functions**:

- `start_capture()`: This is the main function in the module. It starts capturing video from the webcam, detects hand landmarks using the MediaPipe library, interprets the hand gestures, and performs the corresponding Spotify functions.

- **Key Variables**:

- `mp_hand_drawing`, `mp_hands`: Used for drawing hand landmarks and hand tracking.

- `mediaCap`: Captures video feed from the webcam.

- `max_distance`, `play_pause_active`, `next_prev_active`: Used for volume control and to avoid repeated play/pause and next/prev song actions.

- `finger_tip_ids`, `finger_count`, `finger_up`: Used to track the position and movement of fingers.

- `thumb_tip_x`, `thumb_tip_y`, `index_tip_x`, `index_tip_y`, `thumb_index_distance`: Used to calculate the distance between thumb and index finger for volume control.

- **Interdependencies**: This module interacts with the `mediapipe` library for hand tracking and the `spotify_functions` module for controlling Spotify.



- **Core vs. Auxiliary Operations**:

- Core operations include capturing video from the webcam, detecting hand landmarks, interpreting hand gestures, and performing corresponding Spotify functions.

- Auxiliary operations include drawing hand landmarks on the captured video and displaying the video with overlaid information.

- **Operational Sequence**: The module starts by capturing video from the webcam. It then processes each frame to detect hand landmarks. Based on the detected landmarks, it interprets the hand gestures and performs the corresponding Spotify functions. It also overlays the video with hand landmarks and other information before displaying it.

- **Performance Aspects**: The performance of this module largely depends on the accuracy of the hand tracking and gesture recognition, the responsiveness of the Spotify functions, and the processing speed of the video frames.

- **Reusability**: This module can be adapted for use with other applications that can be controlled through hand gestures. However, the gesture interpretation and the corresponding functions would need to be modified accordingly.

- **Usage**: This module is used to control Spotify through hand gestures. It can be run as a standalone script that starts when the user wants to control Spotify using hand gestures.

- **Assumptions**:

- It assumes that the webcam is working properly and can capture video.

- It assumes that the MediaPipe library can accurately track hand landmarks.

- It assumes that the user's hand gestures follow the pre-defined patterns for the Spotify functions.

**Mermaid Diagram**

![[diagram]](./High\_Level\_Doc-2.svg)

**Module: main.py**

- **Module Name**: The module is main.py.
  
- **Primary Objectives**: The main purpose of this module is to authenticate the user, start the gesture control and capture the user's gestures.
  
- **Critical Functions**:
  - `sf.get_user()`: This function is used to get the username and trigger account authentication.
  - `gr.start_capture()`: This function is used to start capturing the user's gestures.
  
- **Key Variables**:
  - `username`: This variable stores the username returned by the `sf.get_user()` function.
  
- **Interdependencies**: This module depends on two other modules:
  - `gesture_recognition` module for capturing the user's gestures.
  - `spotify_functions` module for getting the user's username and triggering account authentication.
  
- **Core vs. Auxiliary Operations**:
  - Core Operations: Getting the username, triggering account authentication, and starting gesture capture.
  - Auxiliary Operations: Printing the username.
  
- **Operational Sequence**: The module first imports the necessary modules. It then triggers account authentication by getting the username using the `sf.get_user()` function. After that, it starts capturing the user's gestures using the `gr.start_capture()` function.
  
- **Performance Aspects**: Performance considerations would primarily be the efficiency and accuracy of the gesture recognition and the speed of the authentication process.

- **Reusability**: The gesture recognition and spotify functions are encapsulated in their respective modules, which makes them reusable. The main module can also be adapted to use different recognition or function modules.

- **Usage**: This module is used to authenticate a user and start capturing their gestures for control purposes.

- **Assumptions**:

- The `sf.get_user()` function will successfully authenticate the user and return a valid username.
- The `gr.start_capture()` function will successfully start capturing the user's gestures.
- The necessary modules `gesture_recognition` and `spotify_functions` are correctly implemented and imported.

## Mermaid Diagram



## Module: spotify\_functions.py

- **Module Name**: The module name is `spotify_functions.py`.

- **Primary Objectives**: The module's purpose is to interact with the Spotify API to manage and control a user's Spotify playback. It provides functions to adjust volume, play or pause music, skip to the next song, and go back to the previous song.

- **Critical Functions**:

- `get_user()`: Retrieves the current user's Spotify username.
- `adjust_volume(vol_percent)`: Adjusts the volume of the user's Spotify playback.
- `play_pause()`: Toggles between playing and pausing the user's Spotify playback based on the current playback status.
- `next_song()`: Skips to the next song in the user's Spotify queue.
- `prev_song()`: Returns to the previous song in the user's Spotify queue.

- **Key Variables**:

- `SPOTIPY_CLIENT_ID`: The Spotify API client ID.

- ``SPOTIPY_CLIENT_SECRET``: The Spotify client secret.
- ``SPOTIPY_REDIRECT_URI``: The redirect URI for Spotify OAuth.
- ``scope``: The scope of permissions for the Spotify API.
- ``sp``: The Spotipy object used to interact with the Spotify API.

- **\*\*Interdependencies\*\***: This module depends on the Spotipy library to interact with the Spotify API.

- **\*\*Core vs. Auxiliary Operations\*\***: Core operations include adjusting volume, playing/pausing music, and navigating through songs.

Auxiliary operations include getting the current user's Spotify username.

- **\*\*Operational Sequence\*\***: The Spotipy object is first created with the necessary credentials and scope. Then, the various functions can be called as needed to control the user's Spotify playback.

- **\*\*Performance Aspects\*\***: Performance is largely dependent on the responsiveness of the Spotify API. Proper handling of API responses and errors can improve performance.

- **\*\*Reusability\*\***: This module is highly reusable as it encapsulates the Spotify API's functionality into distinct functions. As long as the necessary credentials are provided, these functions can be imported and used in any other Python script.

- **\*\*Usage\*\***: This module can be used in any Python application that needs to control Spotify playback for a user. The functions can be called directly with the necessary parameters.

- **\*\*Assumptions\*\***: The module assumes that valid Spotify API credentials are provided and that the user has granted the necessary permissions in the defined scope. It also assumes that the user is currently playing music on Spotify for some functions to work correctly.

## Mermaid Diagram

![diagram](./High\_Level\_Doc-4.svg)

main.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\main.py\_Doc.md):

## Module: main.py

- **Module Name**: The module is main.py.

- **Primary Objectives**: The main purpose of this module is to authenticate the user, start the gesture control and capture the user's gestures.

- **Critical Functions**:

- ``sf.get_user()``: This function is used to get the username and trigger account authentication.

- ``gr.start_capture()``: This function is used to start capturing the user's gestures.

- **Key Variables**:

- ``username``: This variable stores the username returned by the ``sf.get_user()`` function.

- **Interdependencies**: This module depends on two other modules:

- ``gesture_recognition`` module for capturing the user's gestures.

- ``spotify_functions`` module for getting the user's username and triggering account authentication.

- **Core vs. Auxiliary Operations**:

- Core Operations: Getting the username, triggering account authentication, and starting gesture capture.

- Auxiliary Operations: Printing the username.

- **Operational Sequence**: The module first imports the necessary modules. It then triggers account authentication by getting the

username using the ``sf.get_user()`` function. After that, it starts capturing the user's gestures using the ``gr.start_capture()`` function.

- **Performance Aspects**: Performance considerations would primarily be the efficiency and accuracy of the gesture recognition and the speed of the authentication process.

- **Reusability**: The gesture recognition and spotify functions are encapsulated in their respective modules, which makes them reusable. The main module can also be adapted to use different recognition or function modules.

- **Usage**: This module is used to authenticate a user and start capturing their gestures for control purposes.

- **Assumptions**:

- The ``sf.get_user()`` function will successfully authenticate the user and return a valid username.

- The ``gr.start_capture()`` function will successfully start capturing the user's gestures.

- The necessary modules ``gesture_recognition`` and ``spotify_functions`` are correctly implemented and imported.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[main.py] --> B[gesture_recognition]
```

```
A --> C[spotify_functions]
```

```
B --> D[Start Gesture Capturing]
```

```
C --> E[Get User]
```

```
E --> A
```

```
D --> A
```

```
```
```

overview.mdd

(AI-Automation\documentation\create\_overview\_doc\Examples\hobbyist\doc\_Spotify-Gesture-Control-main\overview.mdd):

Certainly, here is the integrated Mermaid Markdown script enclosed within code block delimiters. It represents a consolidated system overview diagram:

```
```mermaid
graph LR
    A[User] --> B[Spotipy Object]
    B --> C[get_user Function]
    B --> D[adjust_volume Function]
    B --> E[play_pause Function]
    B --> F[next_song Function]
    B --> G[prev_song Function]
    C --> H[User Spotify Username]
    D --> I[Volume Adjustment]
    E --> J[Playback Status]
    F --> K[Next Song]
    G --> L[Previous Song]
    ...
```

This script will generate a flowchart diagram that starts with a user interacting with a Spotipy object, which then branches off into various functions, each leading to a different outcome.

spotify_functions.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\hobbyist\doc_Spotify-Gesture-Control-main\spotify_functions.py_Doc.md):

Module: spotify_functions.py

- **Module Name**: The module name is ``spotify_functions.py``.

- **Primary Objectives**: The module's purpose is to interact with the Spotify API to manage and control a user's Spotify playback. It provides functions to adjust volume, play or pause music, skip to the next song, and go back to the previous song.

- **Critical Functions**:

- ``get_user()``: Retrieves the current user's Spotify username.

- ``adjust_volume(vol_percent)``: Adjusts the volume of the user's Spotify playback.

- ``play_pause()``: Toggles between playing and pausing the user's Spotify playback based on the current playback status.

- ``next_song()``: Skips to the next song in the user's Spotify queue.

- ``prev_song()``: Returns to the previous song in the user's Spotify queue.

- **Key Variables**:

- ``SPOTIPY_CLIENT_ID``: The Spotify API client ID.

- ``SPOTIPY_CLIENT_SECRET``: The Spotify client secret.

- ``SPOTIPY_REDIRECT_URI``: The redirect URI for Spotify OAuth.

- ``scope``: The scope of permissions for the Spotify API.

- ``sp``: The Spotipy object used to interact with the Spotify API.

- **Interdependencies**: This module depends on the Spotipy library to interact with the Spotify API.

- **Core vs. Auxiliary Operations**: Core operations include adjusting volume, playing/pausing music, and navigating through songs.

Auxiliary operations include getting the current user's Spotify username.

- **Operational Sequence**: The Spotipy object is first created with the necessary credentials and scope. Then, the various functions can be called as needed to control the user's Spotify playback.

- **Performance Aspects**: Performance is largely dependent on the responsiveness of the Spotify API. Proper handling of API responses and errors can improve performance.
- **Reusability**: This module is highly reusable as it encapsulates the Spotify API's functionality into distinct functions. As long as the necessary credentials are provided, these functions can be imported and used in any other Python script.
- **Usage**: This module can be used in any Python application that needs to control Spotify playback for a user. The functions can be called directly with the necessary parameters.
- **Assumptions**: The module assumes that valid Spotify API credentials are provided and that the user has granted the necessary permissions in the defined scope. It also assumes that the user is currently playing music on Spotify for some functions to work correctly.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[User] --> B[Spotipy Object]
```

```
B --> C[get_user Function]
```

```
B --> D[adjust_volume Function]
```

```
B --> E[play_pause Function]
```

```
B --> F[next_song Function]
```

```
B --> G[prev_song Function]
```

```
C --> H[User Spotify Username]
```

```
D --> I[Volume Adjustment]
```

```
E --> J[Playback Status]
```

```
F --> K[Next Song]
```

G --> L[Previous Song]

...

agent.py\_Doc.md (AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\agent.py\_Doc.md):

## Module: agent.py

Here is a comprehensive analysis of the agent.py module:

**Module Name**: agent.py

**Primary Objectives**: Defines the Agent class, which handles conversational interactions between a human and an AI assistant.

The agent orchestrates passing messages between the human and AI, calling functions, and maintaining conversation state.

**Critical Functions**:

- `__init__`: Constructor to create an Agent instance, initializing key components like memory, messages, functions, etc.
- `step`: Main method to handle a human message, get AI response, execute any functions, and update state.
- `get_ai_reply`: Calls API to get AI response.
- `handle_ai_response`: Parses AI response, calls any functions, handles errors.
- `summarize_messages_inplace`: Summarizes old messages to reduce context length.
- `load` and `save`: Load/save agent state to disk.

**Key Variables**:

- `model`: AI model name (e.g. GPT-3)
- `memory`: CoreMemory object containing persona and dialog history
- `messages`: Full message log between human and AI
- `functions`: Available functions the AI can call

### **\*\*Interdependencies\*\*:**

- ``Interface``: Abstract interface for handling messages/functions.
- ``PersistenceManager``: Abstract persistence manager for saving/loading state.
- ``openai_tools``: Utils for calling OpenAI API.
- ``functions/functions.py``: Available functions to call.

### **\*\*Core vs Auxiliary Operations\*\*:**

- Core: ``step``, ``get_ai_reply``, ``handle_ai_response``
- Auxiliary: ``load``, ``save``, ``summarize_messages_inplace``

### **\*\*Operational Sequence\*\*:**

1. ``step`` gets user message
2. Passes updated message history to ``get_ai_reply``
3. ``get_ai_reply`` calls API for AI response
4. ``handle_ai_response`` parses response, calls functions
5. ``step`` updates state with new messages

### **\*\*Performance Aspects\*\*:**

- Caching past responses
- Summarizing old messages
- Configurable context window size

### **\*\*Reusability\*\*:**

- Could be adapted for different AI models
- ``Interface`` allows different platforms (CLI, web, etc)
- ``PersistenceManager`` allows different storage backends

### **\*\*Usage\*\*:**

- Create `Agent` with config, model, memory, functions
- Call `agent.step(user\_message)` to handle each user interaction

### **\*\*Assumptions\*\*:**

- Stateful conversation with persistent memory
- Messages are text-based
- Using an underlying large language model API

### **## Mermaid Diagram**

```
```mermaid
```

```
graph TD
```

```
    A[External Entity] -->|Data Flow 1| B((Process 1))
```

```
    B --> |Data Flow 2| C((Process 2))
```

```
    C --> |Data Flow 3| D[External Entity]
```

```
```
```

agent\_autoreply.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\agent\_autoreply.py\_Doc.md):

**## Module: agent\_autoreply.py**

- **\*\*Module Name\*\*:** agent\_autoreply.py

- **\*\*Primary Objectives\*\*:** The purpose of this module is to demonstrate how to integrate the MemGPT model into an AutoGen group chat. It provides an example of how to replace the default "coder" agent in AutoGen with a MemGPT agent.

- **\*\*Critical Functions\*\*:**

- ``create_memgpt_autogen_agent_from_config``: This function creates a MemGPT agent with the specified configuration.
  - ``UserProxyAgent``: This class creates a user agent that interacts with the other agents.
  - ``AssistantAgent``: This class creates an assistant agent that can play the role of a coder.
  - ``initiate_chat``: This method starts the group chat with a message from the user.
- **Key Variables**:
- ``config_list``: This list contains the configuration for the model.
  - ``USE_MEMGPT``: This boolean variable determines whether to use the MemGPT model or not.
  - ``llm_config``: This dictionary contains the configuration for the language model.
  - ``user_proxy``: This is the user agent.
  - ``coder``: This is the coder agent, which can either be an AssistantAgent or a MemGPT agent depending on the ``USE_MEMGPT`` variable.
- **Interdependencies**: This module depends on the ``autogen`` and ``memgpt`` packages.
- **Core vs. Auxiliary Operations**: The core operation is the creation and configuration of the agents (either MemGPT or AssistantAgent), and the initiation of the chat. Auxiliary operations include setting up the configuration and environment variables.
- **Operational Sequence**: The module begins by setting up the configuration and creating the user agent. Then, based on the ``USE_MEMGPT`` variable, it either creates an AssistantAgent or a MemGPT agent. Finally, it initiates the chat with a message from the user.
- **Performance Aspects**: Performance depends on the underlying model (GPT-4 or similar) and the configuration settings. The use of MemGPT may improve performance due to its persistent memory capabilities.
- **Reusability**: The module is highly adaptable for reuse. By changing the configuration, one can use different models or agents.

The chat initiation message can also be modified to suit different scenarios.

- **Usage**: This module is used to demonstrate how to integrate a MemGPT agent into an AutoGen group chat. It can be used as a template for similar tasks.

- **Assumptions**: The module assumes that the necessary packages (`autogen` and `memgpt`) are installed and that the OPENAI\_API\_KEY environment variable is set. It also assumes that the user wants to use a GPT-4 model.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[agent_autoreply.py] -- Initiates Chat --> B((User_proxy))
```

```
B -- Sends Message --> C((Coder))
```

```
C -- Sends Message --> B
```

```
B -- Sends Message --> C
```

```
```
```

agent\_docs.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\agent\_docs.py\_Doc.md):

## Module: agent\_docs.py

- **Module Name**: The module is named `agent\_docs.py`.

- **Primary Objectives**: The purpose of this module is to provide an example of how to integrate MemGPT into an AutoGen group chat and interact with documents. It demonstrates the setup process, how to create a group chat, and how to initiate a chat.

- **Critical Functions**:

- `create\_autogen\_memgpt\_agent`: This function creates an AutoGen agent powered by MemGPT.

- ``create_memgpt_autogen_agent_from_config``: This function creates a MemGPT AutoGen agent from a given configuration.
  - ``UserProxyAgent``: This class represents a user in the group chat.
  - ``GroupChat``: This class represents a group chat between the user and two LLM agents.
  - ``GroupChatManager``: This class manages the group chat.
- **Key Variables**:
- ``config_list`` and ``config_list_memgpt``: These lists contain the configurations for creating AutoGen agents.
  - ``USE_AUTOGEN_WORKFLOW``: This boolean variable determines whether to use the AutoGen workflow or not.
  - ``DEBUG``: This boolean variable controls the debug mode.
  - ``interface_kwargs``: This dictionary contains interface-related configurations.
  - ``llm_config`` and ``llm_config_memgpt``: These dictionaries contain configurations for creating agents.
  - ``user_proxy``: This is an instance of ``UserProxyAgent`` representing the user in the group chat.
  - ``coder``: This is an instance of an AutoGen agent.
  - ``groupchat``: This is an instance of ``GroupChat`` representing the group chat.
  - ``manager``: This is an instance of ``GroupChatManager`` managing the group chat.
- **Interdependencies**: This module depends on the ``autogen`` and ``memgpt`` modules to create and manage the AutoGen group chat.
- **Core vs. Auxiliary Operations**: The core operations involve creating the AutoGen agents and initiating the group chat, while auxiliary operations include setting up configurations and debugging options.
- **Operational Sequence**: The module first sets up configurations, creates the user proxy and the coder (AutoGen agent), initializes the group chat, and finally initiates the chat with a message from the user.
- **Performance Aspects**: Performance considerations are not explicitly mentioned in the module. However, the performance could

be influenced by the configurations of the AutoGen agents and the debugging options.

- **Reusability**: This module is highly reusable. It can be used as a template to create AutoGen group chats with different configurations and agents.

- **Usage**: This module is used as an example of how to create an AutoGen group chat with MemGPT and documents. It is used by importing the module and running it.

- **Assumptions**: The module assumes that the necessary packages (`autogen` and `memgpt`) are installed and that the environment variable for the OpenAI API key is set. It also assumes that the user wants to initiate the chat with a specific message.

## ## Mermaid Diagram

```
```mermaid
```

```
graph TB
```

```
    subgraph agent_docs.py
```

```
        User_Input[User Input] -->|pip install| AutoGen_and_MemGPT[AutoGen and MemGPT Installation]
```

```
        AutoGen_and_MemGPT -->|import| Config[Configuration]
```

```
        Config -->|set up| Agents[Agents Creation]
```

```
        Agents -->|initiate| GroupChat[Group Chat]
```

```
        GroupChat -->|run| Output[Output]
```

```
    end
```

```
    click User_Input "https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"
```

```
    click AutoGen_and_MemGPT "https://github.com/microsoft/autogen/blob/main/notebook/agentchat_groupchat.ipynb"
```

```
    click Config "https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"
```

```
    click Agents "https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"
```

```
    click GroupChat "https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"
```

```
    click Output "https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"
```


'''

agent_groupchat.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\agent_groupchat.py_Doc.md):

Module: agent_groupchat.py

- **Module Name**: agent_groupchat.py

- **Primary Objectives**: This module is an example of how to integrate MemGPT into an AutoGen group chat. It sets up a simulated group chat environment where a user interacts with two agents: a product manager and a coder.

- **Critical Functions**:

- `create_autogen_memgpt_agent`: Creates a MemGPT agent for the group chat.
- `create_memgpt_autogen_agent_from_config`: Creates a MemGPT agent from a given configuration.
- `autogen.UserProxyAgent`: Creates a user agent.
- `autogen.AssistantAgent`: Creates an assistant agent.
- `autogen.GroupChat`: Initializes the group chat.
- `autogen.GroupChatManager`: Manages the group chat.

- **Key Variables**:

- `config_list` and `config_list_memgpt`: Configuration lists for AutoGen agents.
- `USE_MEMGPT`, `USE_AUTOGEN_WORKFLOW`, `DEBUG`: Flags to control the behavior of the program.
- `interface_kwargs`, `llm_config`, `llm_config_memgpt`: Configuration parameters.
- `user_proxy`, `pm`, `coder`: Agents participating in the group chat.
- `groupchat`, `manager`: Handles the group chat.

- **Interdependencies**: This module interacts with the AutoGen and MemGPT libraries.

- **Core vs. Auxiliary Operations**: The core operations involve setting up the group chat and managing the interactions between the user and the agents. Auxiliary operations include setting up the configuration and creating the agents.
- **Operational Sequence**: The module first sets up the configuration and creates the agents. Then, it initializes the group chat and begins the chat with a message from the user.
- **Performance Aspects**: The performance of this module would depend on the efficiency of the AutoGen and MemGPT libraries.
- **Reusability**: This module can be reused to set up different scenarios for a group chat with AutoGen and MemGPT agents. The agents, their roles, and the initial message can be customized.
- **Usage**: This module is used to simulate a group chat environment where a user interacts with two agents: a product manager and a coder.
- **Assumptions**: The module assumes that the necessary libraries are installed and the environment variables are set correctly. It also assumes that the user initiates the chat.

Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[User] -->|Input| B[User_proxy]
```

```
B -->|Message| D[GroupChat]
```

```
C[Product_manager] -->|Message| D
```

```
E[Coder] -->|Message| D
```

```
D -->|Output| A
```

```
D -->|Output| C
```

D -->|Output| E

...

airoboros.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\airoboros.py\_Doc.md):

## Module: airoboros.py

- **Module Name**: airoboros.py

- **Primary Objectives**: The purpose of this module is to provide a wrapper for the Airoboros 70b v2.1 model, which only generates JSON and no inner thoughts. The module also contains a class for a wrapper that does include inner monologue as a field.

- **Critical Functions**:

- `chat_completion_to_prompt(self, messages, functions)`: This method formats a prompt for the Airoboros model.

- `clean_function_args(self, function_name, function_args)`: This method cleans function arguments specific to the MemGPT model.

- `output_to_chat_completion_response(self, raw_llm_output)`: This method transforms raw LLM output into a ChatCompletion style response.

- **Key Variables**:

- `simplify_json_content`: This variable determines whether to simplify the JSON content.

- `clean_func_args`: This variable decides whether to clean function arguments.

- `include_assistant_prefix`: This variable determines whether to include the assistant prefix.

- `include_opening_brance_in_prefix`: This variable decides whether to include the opening brace in the prefix.

- `include_section_separators`: This variable determines whether to include section separators.

- **Interdependencies**: This module interacts with the `wrapper_base` (from which it inherits), `json_parser` for cleaning JSON, and

`errors` for handling exceptions.

- **Core vs. Auxiliary Operations**: Core operations include formatting prompts for the Airoboros model, cleaning function arguments, and transforming raw LLM output. Auxiliary operations include the handling of various flags to control aspects of the formatting and cleaning processes.

- **Operational Sequence**: The operational sequence is primarily driven by the `chat\_completion\_to\_prompt` function, which formats the prompt, followed by the `clean\_function\_args` function to clean function arguments, and finally the `output\_to\_chat\_completion\_response` function to transform the output.

- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the module is designed to handle JSON parsing, formatting, and cleaning efficiently.

- **Reusability**: The module is designed to be reusable, with the ability to handle various formatting and cleaning tasks related to the Airoboros model. It can be adapted for use with other models that require similar tasks.

- **Usage**: This module is used to interact with the Airoboros model, handling tasks such as formatting prompts, cleaning function arguments, and transforming model output.

- **Assumptions**: It is assumed that the first message is always from the system, and the role of the message can only be "user", "assistant", or "function". The module also assumes valid JSON format for the input and output.

## Mermaid Diagram

```mermaid

graph LR

A[airoboros.py]

B((LLMChatCompletionWrapper))

C((Airoboros21Wrapper))

D((Airoboros21InnerMonologueWrapper))

E[json_parser]

F[errors]

G[wrapper_base]

A --> B

B --> C

C --> D

A --> E

A --> F

A --> G

...

api.py_Doc.md (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\api.py_Doc.md):

Module: api.py

- **Module Name**: api.py

- **Primary Objectives**: The module's main purpose is to interact with an external API (LM Studio) to generate responses for prompts. It can either use the ChatCompletions API or the basic string completions API.

- **Critical Functions**:

- ``get_lmstudio_completion(endpoint, prompt, context_window, settings=SIMPLE, api="chat")``: This function sends a request to the LM Studio API and retrieves the generated completion.

- **Key Variables**:

- ``LMSTUDIO_API_CHAT_SUFFIX``: Used to construct the endpoint for the ChatCompletions API.

- ``LMSTUDIO_API_COMPLETIONS_SUFFIX``: Used to construct the endpoint for the basic string completions API.

- ``DEBUG``: A flag for debugging.

- ``endpoint``: The base URL for the API.

- ``prompt``: The input for the API to complete.
 - ``context_window``: The maximum number of tokens to be generated.
 - ``settings``: The settings for the generation.
 - ``api``: The type of API to be used.
- **Interdependencies**: This module relies on the 'requests' library to send HTTP requests, the 'urllib.parse' library to join URLs, and the 'os' library to interact with the operating system. It also depends on the '.settings' and '..utils' modules for settings and utility functions respectively.
- **Core vs. Auxiliary Operations**: The core operation of this module is to interact with the LM Studio API to generate completions. The auxiliary operations include error handling and debugging.
- **Operational Sequence**: The function first checks if the number of tokens in the prompt exceeds the context window. Then, it prepares the request and sends it to the appropriate API endpoint based on the 'api' parameter. Finally, it handles the response, including error handling.
- **Performance Aspects**: Performance considerations include the number of tokens in the prompt and the context window, as well as the response time of the API.
- **Reusability**: The module is highly reusable as it provides a function to interact with the LM Studio API, which can be used in different contexts.
- **Usage**: This module is used to generate completions for prompts using the LM Studio API.
- **Assumptions**: The module assumes that the LM Studio API is available and reachable at the provided endpoint. It also assumes that the number of tokens in the prompt does not exceed the context window.

Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A("api.py") --> B("get_lmstudio_completion")
```

```
B --> C("ChatCompletions API")
```

```
B --> D("Basic String Completions API")
```

```
C --> E("Response from ChatCompletions API")
```

D --> F("Response from Basic String Completions API")

E --> B

F --> B

...

## Module: api.py

- **Module Name**: api.py

- **Primary Objectives**: This module is designed to interact with the Llama.cpp API. It sends a POST request to the API with a provided prompt and receives a completion response.

- **Critical Functions**:

- `get_llamacpp_completion(endpoint, prompt, context_window, grammar=None, settings=SIMPLE)`: This function sends a POST request to the Llama.cpp API and returns the response. It also handles errors and exceptions related to the request.

- **Key Variables**:

- `LLAMACPP_API_SUFFIX`: This is the endpoint suffix for the Llama.cpp API.

- `SIMPLE`: This is the default settings for the API request.

- `endpoint`: This is the base URL for the API.

- `prompt`: This is the input for the API.

- `context_window`: This is the maximum context length.

- `grammar`: This is an optional parameter for a grammar file.

- `settings`: These are the settings for the API request.

- **Interdependencies**: This module depends on the `requests` library for sending HTTP requests, `os` and `urllib.parse` for URL and path handling, and custom modules `.settings` and `..utils` for loading settings and utility functions.

- **Core vs. Auxiliary Operations**: The core operation of this module is the ``get_llamacpp_completion`` function. The error handling within this function can be considered as auxiliary operations.
- **Operational Sequence**: The module first checks if the prompt exceeds the maximum context length. It then prepares the request with the provided settings and prompt. If a grammar file is provided, it is loaded and added to the request. The module then sends the POST request to the API and returns the response.
- **Performance Aspects**: The module doesn't seem to have any specific performance considerations. However, the performance might be influenced by the response time of the Llama.cpp API.
- **Reusability**: This module is highly reusable as it provides a function to interact with the Llama.cpp API which can be used in different contexts where API interaction is required.
- **Usage**: This module is used by importing it and calling the ``get_llamacpp_completion`` function with the necessary parameters.
- **Assumptions**: The module assumes that the provided endpoint starts with "http://" or "https://". It also assumes that the Llama.cpp server is running and reachable at the provided endpoint.

## ## Mermaid Diagram

```
```mermaid
```

```
graph TB
```

```
A[api.py] --> B[get_llamacpp_completion]
```

```
B --> C[load_grammar_file]
```

```
B --> D[requests.post]
```

```
D --> E[response]
```

```
E --> F[result]
```

```
F --> B
```


'''

Module: api.py

- **Module Name**: The module is named as `api.py`.

- **Primary Objectives**: The purpose of this module is to interact with the Koboldcpp API to generate text completions based on the given prompt and settings.

- **Critical Functions**: The main function in this module is `get_koboldcpp_completion()`. This function takes in parameters like endpoint, prompt, context_window, grammar, and settings. It sends a POST request to the API and returns the generated text.

- **Key Variables**: The key variables in this module are `KOBOLDCPP_API_SUFFIX`, `DEBUG`, `SIMPLE`, `endpoint`, `prompt`, `context_window`, `grammar`, `settings`, `request`, `URI`, `response`, and `result`.

- **Interdependencies**: This module interacts with other system components such as `settings` and `utils` modules. It uses the `SIMPLE` settings and the `load_grammar_file` and `count_tokens` functions from these modules.

- **Core vs. Auxiliary Operations**: The core operation is the interaction with the Koboldcpp API to generate text. The auxiliary operations include token counting, grammar file loading, and error handling.

- **Operational Sequence**: The sequence of operation is as follows:

1. Count the tokens in the prompt.
2. Prepare the request with the settings, prompt, and context window.
3. Load the grammar file if provided.
4. Send a POST request to the API.
5. Handle any errors and return the generated text.

- **Performance Aspects**: Performance considerations include ensuring the prompt does not exceed the maximum context length, and handling any non-200 response codes from the API.
- **Reusability**: This module is highly reusable. The ``get_koboldcpp_completion()`` function can be used to interact with the Koboldcpp API from any part of the system that requires text generation.
- **Usage**: This module is used whenever text generation is required. It is invoked by providing the appropriate parameters to the ``get_koboldcpp_completion()`` function.
- **Assumptions**: The main assumption made in this module is that the Koboldcpp API is running and reachable at the provided endpoint.

Mermaid Diagram

```mermaid

graph TB

A[api.py]

B[get\_koboldcpp\_completion]

C[settings]

D[grammar]

E[endpoint]

F[requests.post]

G[response]

H[result]

I[Exception]

J[DEBUG]

A --> B

B --> C

B --> D

B --> E

B -->|post request| F

F -->|response| G

G -->|if status code is 200| H

G -->|if status code is not 200| I

H --> J

I --> J

...

## Module: api.py

- **Module Name**: The module is named `api.py`.

- **Primary Objectives**: This module is designed to interact with a web-based API. Specifically, it sends a text prompt to the OpenAI API and retrieves the generated completion.

- **Critical Functions**:

- `get_webui_completion`: This is the main function in the module. It takes in parameters like the endpoint, prompt, context window, settings, and grammar, and it sends a request to the OpenAI API. It then processes the response and returns the generated text.

- **Key Variables**:

- `WEBUI_API_SUFFIX`: This variable holds the suffix for the API endpoint.

- `DEBUG`: This variable is a flag for debugging.

- `endpoint`: This variable holds the URL of the API endpoint.

- `prompt`: This variable contains the text prompt to be sent to the API.

- `context_window`: This variable specifies the maximum number of tokens that the API should consider from the prompt.

- ``settings``: This variable contains settings for the text generation.
  - ``grammar``: This variable, if provided, contains grammar rules for the text generation.
  - ``request``: This variable holds the request to be sent to the API, including the prompt and settings.
  - ``URI``: This variable holds the complete URL of the API endpoint.
- **Interdependencies**: This module depends on the ``requests`` library for sending HTTP requests, and the ``urllib.parse`` library for manipulating URLs. It also depends on the ``settings`` and ``utils`` modules in the same package.
- **Core vs. Auxiliary Operations**: The core operation of this module is sending the request to the API and processing the response, done in the ``get_webui_completion`` function. Auxiliary operations include counting tokens in the prompt, loading a grammar file, and validating the endpoint URL.
- **Operational Sequence**: The ``get_webui_completion`` function first counts the tokens in the prompt and validates the context window. It then prepares the request, including setting the grammar if provided. It validates the endpoint URL, sends the request to the API, and processes the response. If the response is successful, it extracts the generated text and returns it.
- **Performance Aspects**: The performance of this module largely depends on the performance of the OpenAI API. If the API is slow or unresponsive, the module will also be slow. The module also includes some error handling for non-200 response codes.
- **Reusability**: This module is quite reusable. The ``get_webui_completion`` function can be used with any endpoint and text prompt, and with any settings and grammar that are compatible with the OpenAI API.
- **Usage**: This module is used by importing it and calling the ``get_webui_completion`` function with the appropriate parameters.
- **Assumptions**: This module assumes that the OpenAI API is available at the provided endpoint and that it responds with a JSON object that includes a ``choices`` array with a ``text`` field. It also assumes that the ``settings`` and ``grammar`` parameters are compatible

with the API.

## Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[api.py] -->|request| B[get_webui_completion]
```

```
B -->|settings| C[load_grammar_file]
```

```
B -->|request| D[requests.post]
```

```
D -->|response| E[response.json]
```

```
E -->|result| F[return result]
```

```
```
```

## Module: api.py

- **Module Name**: The module name is `api.py`.

- **Primary Objectives**: This module is designed to send a POST request to a specified API endpoint and return the response. It is particularly designed to work with the Ollama API for text generation.

- **Critical Functions**:

- `get_ollama_completion`: This function takes in several parameters including the API endpoint, the model to be used, the prompt, the context window, settings, and grammar. It constructs the API request, sends it, and returns the response.

- **Key Variables**:

- `OLLAMA_API_SUFFIX`: This is the suffix for the API endpoint.

- `DEBUG`: This boolean variable is used for debugging purposes.

- `request`: This dictionary contains the data to be sent in the API request.

- **Interdependencies**: This module depends on several other modules including `os`, `requests`, `urllib.parse`, and local modules

such as `settings` and `utils`.

- **Core vs. Auxiliary Operations**:

- Core Operations: The core operation is the `get\_ollama\_completion` function which sends the API request and returns the response.

- Auxiliary Operations: Error handling and debugging print statements are auxiliary operations.

- **Operational Sequence**: The function first checks the validity of the inputs, then constructs the API request, sends it, and returns the response.

- **Performance Aspects**: The performance of this module is dependent on the responsiveness of the API it interacts with. Error handling is implemented to manage potential issues.

- **Reusability**: This module is specific to the Ollama API but can be adapted for use with other APIs that require similar request structures.

- **Usage**: This module is used to interact with the Ollama API, sending a POST request and returning the received response.

- **Assumptions**: The module assumes that the API endpoint is correctly formatted and the API server is reachable. It also assumes that the `model` parameter is not `None`.

## Mermaid Diagram

```mermaid

graph LR

A[api.py] --> B[get_ollama_completion]

B --> C[Settings]

C --> D[Request]

D --> E[Response]

E --> F[Result]

B --> G[Error Handling]

...

base.py_Doc.md (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\base.py_Doc.md):

Module: base.py

- **Module Name**: base.py

- **Primary Objectives**: This module provides a set of functions for interacting with a human user, managing conversation and memory, and performing search operations within the conversation and archival memory.

- **Critical Functions**:

1. ``send_message()``: Sends a message to the human user.
2. ``pause_heartbeats()``: Temporarily ignore timed heartbeats.
3. ``core_memory_append()``: Appends content to a section of the core memory.
4. ``core_memory_replace()``: Replaces content in a section of the core memory.
5. ``conversation_search()``: Searches prior conversation history using case-insensitive string matching.
6. ``conversation_search_date()``: Searches prior conversation history using a date range.
7. ``archival_memory_insert()``: Adds content to archival memory.
8. ``archival_memory_search()``: Searches archival memory using semantic (embedding-based) search.

- **Key Variables**:

1. ``message``: The message content to be sent or processed.
2. ``minutes``: The number of minutes to ignore heartbeats for.
3. ``name``, ``content``, ``old_content``, ``new_content``: Variables related to memory management.

4. `query`, `page`, `start_date`, `end_date`: Variables related to search operations.

- **Interdependencies**: This module interacts with the `interface`, `memory`, and `persistence_manager` components of the system.

- **Core vs. Auxiliary Operations**: Core operations include sending messages, managing memory, and performing search operations. Auxiliary operations include pausing heartbeats and formatting search results.

- **Operational Sequence**:

1. A message is sent or a command is given.
2. The appropriate function is invoked, such as sending a message, updating memory, or performing a search.
3. The function performs its task and returns a result or status message.

- **Performance Aspects**: This module is designed for efficient memory management and search operations. It uses case-insensitive string matching and semantic search for efficient retrieval of conversation history and archival memory.

- **Reusability**: The functions provided in this module are general-purpose and can be reused across different conversations and sessions.

- **Usage**: This module is used to manage the conversation with the user, update and query the conversation and archival memory, and control the system's responsiveness.

- **Assumptions**:

1. It is assumed that the input parameters for each function are provided in the correct format and type.
2. It is also assumed that the memory management and persistence components are functioning correctly.

Mermaid Diagram

```mermaid



graph TB

subgraph base.py

A[send\_message function] --> B[Core Memory]

C[pause\_heartbeats function] --> D[Heartbeats Control]

E[core\_memory\_append function] --> B[Core Memory]

F[core\_memory\_replace function] --> B[Core Memory]

G[conversation\_search function] --> H[Conversation History]

I[conversation\_search\_date function] --> H[Conversation History]

J[archival\_memory\_insert function] --> K[Archival Memory]

L[archival\_memory\_search function] --> K[Archival Memory]

end

...

chat\_completion\_proxy.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\chat\_completion\_proxy.py\_Doc.md):

## Module: chat\_completion\_proxy.py

- **Module Name**: The module name is "chat\_completion\_proxy.py".

- **Primary Objectives**: The primary purpose of this module is to create a drop-in replacement for an agent's ChatCompletion call that runs on an OpenLLM backend. It facilitates communication with the backend, converts the message sequence into a prompt that the model expects, and processes the response.

- **Critical Functions**:

- `get_chat_completion`: This is the main function of the module. It requires the model, messages, context\_window, endpoint, and endpoint\_type. It handles the communication with the backend, the conversion of the message sequence into a prompt, and the processing of the response.

- ``get_available_wrappers``: This function returns all available wrappers.

- ``get_webui_completion``, ``get_webui_completion_legacy``, ``get_lmstudio_completion``, ``get_llamacpp_completion``,

``get_koboldcpp_completion``, ``get_ollama_completion``: These functions are used to get completions from different types of endpoints.

- **Key Variables**:

- ``endpoint``: This is the base URL of the API.

- ``endpoint_type``: This determines the type of endpoint to be used.

- ``DEBUG``: This is a boolean variable used for debugging.

- ``has_shown_warning``: This is used to control the display of warnings.

- ``available_wrappers``: This is a list of all available wrappers.

- **Interdependencies**: This module interacts with several other system components. It imports functions from other modules such

as ``webui.api``, ``webui.legacy_api``, ``lmstudio.api``, ``llamacpp.api``, ``koboldcpp.api``, ``ollama.api``, ``llm_chat_completion_wrappers``,

``constants``, ``utils``, ``prompts.gpt_summarize``, and ``errors``.

- **Core vs. Auxiliary Operations**: The core operation of this module is the ``get_chat_completion`` function, which communicates with the backend, converts the message sequence into a prompt, and processes the response. Auxiliary operations include the retrieval of available wrappers and the processing of different types of completions.

- **Operational Sequence**: The operational sequence starts with the ``get_chat_completion`` function, which checks the validity of the input, determines the wrapper to use, converts the message sequence into a prompt, gets the completion from the appropriate endpoint, and processes the response.

- **Performance Aspects**: The performance of this module depends on the efficiency of the conversion of the message sequence into a prompt, the speed of the communication with the backend, and the processing of the response.

- **Reusability**: This module is highly reusable. It can be used with different models, messages, and endpoints.

- **Usage**: This module is used to create a drop-in replacement for an agent's ChatCompletion call that runs on an OpenLLM backend.

- **Assumptions**: The module assumes that the context\_window, endpoint, and endpoint\_type are provided for the `get\_chat\_completion` function. It also assumes that the endpoint is reachable and returns a valid response.

## Mermaid Diagram

```mermaid

graph TD

A[ChatCompletion] --> B[get_chat_completion]

B --> C[get_available_wrappers]

B --> D[llm_wrapper.chat_completion_to_prompt]

D --> E[get_webui_completion]

D --> F[get_webui_completion_legacy]

D --> G[get_lmstudio_completion]

D --> H[get_llamacpp_completion]

D --> I[get_koboldcpp_completion]

D --> J[get_ollama_completion]

E --> K[llm_wrapper.output_to_chat_completion_response]

F --> K

G --> K

H --> K

I --> K

J --> K

K --> L[Response]

...

cli.py_Doc.md (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\cli.py_Doc.md):

Module: cli.py

- **Module Name**: cli.py

- **Primary Objectives**: The module is primarily used for running and configuring the MemGPT agent. It also contains functions to attach data to the agent and check the version.

- **Critical Functions**:

- `run()`: This method is used to start chatting with a MemGPT agent. It includes various parameters like persona, agent, human, model, debug, etc.

- `attach()`: This method is used to load the data contained in a data source into the agent's memory.

- `version()`: This method is used to print and return the version of memgpt.

- **Key Variables**:

- `agent`: Specifies the agent name.

- `persona`: Specifies the persona.

- `human`: Specifies the human.

- `model`: Specifies the LLM model.

- `debug`: Enables debugging output.

- `config`: Holds the configuration for MemGPT.

- **Interdependencies**: This module interacts with several other modules such as `memgpt`, `typer`, `json`, `sys`, `io`, `logging`, `os`, `prettytable`, `questionary`, `openai`, `llama_index`, `memgpt.interface`, `memgpt.cli.cli_config`, `memgpt.agent`, `memgpt.system`, `memgpt.presets.presets`, `memgpt.constants`, `memgpt.personas.personas`, `memgpt.humans.humans`, `memgpt.utils`, `memgpt.persistence_manager`, `memgpt.config`, `memgpt.embeddings`, and `memgpt.openai_tools`.

- **Core vs. Auxiliary Operations**: The core operations of this module are running the agent, attaching data to the agent, and checking the version. Auxiliary operations include setting up the logger, loading or creating agent configuration, and pretty printing agent configuration.

- **Operational Sequence**: The module starts with importing necessary libraries and then defines the main functions. The `run` function is the main entry point for running the agent. If the agent config doesn't exist, it will create a new one; otherwise, it will use the existing one. The `attach` function is for attaching data to the agent, and `version` is for checking the memgpt version.
- **Performance Aspects**: The performance of this module largely depends on the configurations set and the data provided. The module uses an efficient way of loading data into the agent's memory in batches to optimize memory usage.
- **Reusability**: The module is highly reusable. It's designed to run different agents with various configurations, attach different data sources to the agents, and check the version.
- **Usage**: This module is used as a command-line interface for interacting with the MemGPT agent.
- **Assumptions**: The module assumes that the necessary libraries are installed and the agent configurations are set correctly. It also assumes that the data source provided in the `attach` function contains the correct data for the agent.

Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
User -->|Input| run
```

```
run -->|Processing| typer
```

```
typer -->|Processing| json
```

```
json -->|Processing| sys
```

```
sys -->|Processing| io
```

```
io -->|Processing| logging
```

```
logging -->|Processing| os
```

```
os -->|Processing| PrettyTable
```

```
PrettyTable -->|Processing| questionnaire
```

```
questionnaire -->|Processing| openai
```

```
openai -->|Processing| llama_index
```

```
llama_index -->|Processing| VectorStoreIndex
```

```
VectorStoreIndex -->|Processing| SimpleDirectoryReader
```

SimpleDirectoryReader -->|Processing| ServiceContext

ServiceContext -->|Processing| CLIInterface

CLIInterface -->|Processing| configure

configure -->|Processing| agent

agent -->|Processing| system

system -->|Processing| presets

presets -->|Processing| constants

constants -->|Processing| personas

personas -->|Processing| humans

humans -->|Processing| utils

utils -->|Processing| LocalStateManager

LocalStateManager -->|Processing| MemGPTConfig

MemGPTConfig -->|Processing| AgentConfig

AgentConfig -->|Processing| MEMGPT\_DIR

MEMGPT\_DIR -->|Processing| Agent

Agent -->|Processing| embedding\_model

embedding\_model -->|Processing| configure\_azure\_support

configure\_azure\_support -->|Processing| check\_azure\_embeddings

check\_azure\_embeddings -->|Output| run

...

cli\_config.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\cli\_config.py\_Doc.md):

## Module: cli\_config.py

- **Module Name**: This is the "cli\_config.py" module.

- **Primary Objectives**: This module is responsible for configuring the MemGPT model and its components. It allows for the setting of various parameters and elements including model endpoints, model types, context window, embedding endpoints, CLI configurations, and archival storage among others.

- **Critical Functions**:

- ``get_azure_credentials()``: Retrieves Azure credentials from the environment variables.
- ``get_openai_credentials()``: Retrieves OpenAI credentials from the environment variables.
- ``configure_llm_endpoint(config: MemGPTConfig)``: Configures the model endpoint.
- ``configure_model(config: MemGPTConfig, model_endpoint_type: str)``: Configures the model, model wrapper and context window.
- ``configure_embedding_endpoint(config: MemGPTConfig)``: Configures the embedding endpoint.
- ``configure_cli(config: MemGPTConfig)``: Configures the CLI with preset, persona, human, and agent.
- ``configure_archival_storage(config: MemGPTConfig)``: Configures the archival storage backend.
- ``configure()``: Updates default MemGPT configurations.
- ``list(option: str)``: Lists all agents, humans, personas or data sources.
- ``add(option: str, name: str, text: str, filename: str)``: Adds a persona or human.

- **Key Variables**:

- ``app``: Instance of the Typer application.
- ``azure_key`, `azure_endpoint`, `azure_version`, `azure_deployment`, `azure_embedding_deployment``: Azure credentials.
- ``openai_key``: OpenAI API key.
- ``model_endpoint_type`, `model_endpoint``: Model endpoint configurations.
- ``model`, `model_wrapper`, `context_window``: Model configurations.
- ``embedding_endpoint_type`, `embedding_endpoint`, `embedding_dim``: Embedding configurations.
- ``default_preset`, `default_persona`, `default_human`, `default_agent``: CLI configurations.
- ``archival_storage_type`, `archival_storage_uri``: Archival storage configurations.

- **Interdependencies**: This module interacts with other system components such as the ``questionary``, ``typer``, ``os``, ``shutil``, ``openai``, ``prettytable``, ``memgpt`` and other utility modules.
- **Core vs. Auxiliary Operations**: The core operations of this module are the configuration of the model, embedding endpoint, CLI, and archival storage. Auxiliary operations include retrieving Azure and OpenAI credentials, listing agents, humans, personas or data sources, and adding a persona or human.
- **Operational Sequence**: The sequence starts with retrieving credentials, then configuring the model endpoint, model, embedding endpoint, CLI, and archival storage. After configuration, the module can list or add agents, humans, personas, or data sources.
- **Performance Aspects**: The performance of this module depends on the successful retrieval of credentials and configuration of the different components. Errors in any of these steps can lead to performance issues.
- **Reusability**: This module is highly reusable as it provides a standardized way to configure the MemGPT model and its components, which can be used across different projects and applications.
- **Usage**: This module is used to configure the MemGPT model and its components. It can be used by calling the ``configure()`` function, after which the model can be used as per the set configurations.
- **Assumptions**: The module assumes that the necessary environment variables for Azure and OpenAI are set. It also assumes that the directories for personas and humans exist.

## ## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[cli_config.py] -->|imports| B[builtins, questionary, openai, PrettyTable, typer, os, shutil, defaultdict]
```

```
A -->|functions| C[get_azure_credentials, get_openai_credentials, configure_llm_endpoint, configure_model,
```


configure_embedding_endpoint, configure_cli, configure_archival_storage, configure, list, add]

B --> D[External Libraries]

C --> E[Internal Functions]

A -->|variables| F[app, DEFAULT_ENDPOINTS, DEFAULT_OLLAMA_MODEL, DEFAULT_WRAPPER_NAME,
LLM_MAX_TOKENS]

F --> G[Internal Variables]

...

cli_load.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\cli_load.py_Doc.md):

Module: cli_load.py

- **Module Name**: cli_load.py

- **Primary Objectives**: This Python module is designed to load data into MemGPT's archival storage. It supports loading data from different sources such as directories, webpages, databases, and vector databases.

- **Critical Functions**:

- `store_docs(name, docs, show_progress=True)`: This function embeds and stores documents.

- `load_index(name: str, dir: str)`: This function loads a LlamaIndex saved VectorIndex into MemGPT.

- `load_directory(name: str, input_dir: str, input_files: List[str], recursive: bool)`: This function loads data from a directory.

- `load_webpage(name: str, urls: List[str])`: This function loads data from webpages.

- `load_database(name: str, query: str, dump_path: str, scheme: str, host: str, port: int, user: str, password: str, dbname: str)`: This function loads data from a database.

- `load_vector_database(name: str, uri: str, table_name: str, text_column: str, embedding_column: str)`: This function loads pre-computed embeddings into MemGPT from a database.

- **Key Variables**:

- `name`: The name of the dataset to load.

- `docs`: The documents to be embedded and stored.

- ``dir``: The path to the directory containing the index.
- ``input_dir``, ``input_files``: The path to the directory or files containing the dataset.
- ``urls``: The list of URLs to load.
- ``query``, ``dump_path``, ``scheme``, ``host``, ``port``, ``user``, ``password``, ``dbname``: The parameters for database connection.
- ``uri``, ``table_name``, ``text_column``, ``embedding_column``: The parameters for vector database connection.
- **Interdependencies**: This module interacts with other system components such as ``memgpt.embeddings``, ``memgpt.connectors.storage``, ``memgpt.config``, and ``llama_index``.
- **Core vs. Auxiliary Operations**: The core operations of this module are the loading of data from different sources and storing them. The auxiliary operations include the embedding of documents and creating storage connectors.
- **Operational Sequence**: The sequence of operations depends on the source of the data. The general sequence is to load the data, embed the documents, and store them into the storage.
- **Performance Aspects**: Performance considerations include the efficiency of data loading, embedding, and storing. The module uses `tqdm` for progress bars to provide feedback on long-running operations.
- **Reusability**: This module is highly reusable as it provides a generic framework for loading data from different sources. The loading functions can be easily adapted for different sources or datasets.
- **Usage**: The module is used by calling the appropriate load function with the necessary arguments. For example, to load data from a directory, you would call ``load_directory()`` with the name of the dataset and the directory path.
- **Assumptions**: The module assumes that the provided data is in a suitable format for the chosen load function. For example, when loading data from a database, it assumes that the database connection parameters are correct. It also assumes that the embedding dimension of the loaded data matches the configuration.

Mermaid Diagram

```
```mermaid
```

```
graph TB
```

```
A[cli_load.py]
```

```
B[load_index]
```

```
C[load_directory]
```

D[load\_webpage]  
E[load\_database]  
F[load\_vector\_database]  
G[store\_docs]  
H[StorageConnector]

A --> B  
A --> C  
A --> D  
A --> E  
A --> F  
B --> G  
C --> G  
D --> G  
E --> G  
F --> G  
G --> H

...

config.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\config.py\_Doc.md):

## Module: config.py

Here is a comprehensive analysis of the config.py module:

\*\*\*Module Name\*\*\*: config.py

**\*\*Primary Objectives\*\***: Defines configuration classes and utilities to load MemGPT agent and runtime configuration from files.

Provides helpers to interactively create new configs.

**\*\*Critical Functions\*\***:

- MemGPTConfig: Dataclass for main MemGPT config loaded from config file. Handles model, embedding, storage configs.
- AgentConfig: Dataclass for agent-specific config. Stores persona, model, embedding info.
- Config: Helper class to initialize configs from flags or interactive prompts. Handles personas.

**\*\*Key Variables\*\***:

- MEMGPT\_DIR: Base directory for MemGPT data storage.
- model\_choices: Available models for interactive config.
- LLM\_MAX\_TOKENS: Context length limits per model.

**\*\*Interdependencies\*\***:

- Depends on model wrappers, personas, humans, presets defined elsewhere. Saves configs to disk.

**\*\*Core vs Auxiliary Operations\*\***:

- Core: Loading/saving configs, prompting for settings, config dataclasses.
- Auxiliary: Indentation, persona text helpers.

**\*\*Operational Sequence\*\***:

1. Load default config from file or create new one interactively.
2. Override settings from flags or interactive prompts.
3. Save updated config to file.

**\*\*Performance Aspects\*\***:

- Avoid reloading config repeatedly. Cache and reuse.
- Config files enable quick launch without prompts.

#### **\*\*Reusability\*\*:**

- Configs encapsulate all settings in shareable files.
- Dataclasses provide reusable config objects.

#### **\*\*Usage\*\*:**

- Created at launch to configure MemGPT runtime environment.
- AgentConfig used to persist agent-specific settings.

#### **\*\*Assumptions\*\*:**

- Config file in expected MEMGPT\_DIR location.
- Personas and humans in expected subdirs.

constants.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\constants.py\_Doc.md):

## Module: constants.py

- **\*\*Module Name\*\***: The module name is "constants.py".
- **\*\*Primary Objectives\*\***: The primary purpose of this module is to define constants that are used throughout the application. In this case, it defines a single constant, TIMEOUT, which presumably is used to set a time limit for some operation or operations.
- **\*\*Critical Functions\*\***: This module does not contain any functions or methods. It only defines a constant.
- **\*\*Key Variables\*\***: The key variable in this module is TIMEOUT. It is set to 30, which is presumably a time in seconds.

- **Interdependencies**: As a constants module, it may not have dependencies of its own, but other modules in the system might depend on the constants it defines. Any module that needs to use a timeout of 30 seconds would likely import this constant from this module.
- **Core vs. Auxiliary Operations**: This module does not perform any operations, core or auxiliary. It simply provides a value that other modules can use.
- **Operational Sequence**: There is no operational sequence in this module, as it does not perform operations.
- **Performance Aspects**: There are no direct performance aspects to this module as it simply defines a constant. However, the value of the TIMEOUT constant could indirectly affect performance in other modules that use it. For example, if TIMEOUT is used as a limit for a network operation, setting it to a higher value could slow down the application, while setting it to a lower value could lead to incomplete operations or errors.
- **Reusability**: This module is highly reusable. Any part of the system that needs to use a timeout of 30 seconds can import the TIMEOUT constant from this module. Furthermore, if the need arises for a different timeout value in the future, a new constant can be added to this module.
- **Usage**: To use this module, other modules would import it and then use the TIMEOUT constant. For example, in Python, this might look like: `from constants import TIMEOUT`.
- **Assumptions**: The main assumption here is that TIMEOUT is a suitable name for this constant, and that a value of 30 seconds is appropriate for the timeout in question. Further assumptions might depend on how and where the TIMEOUT constant is used in the rest of the system.

## Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A(constants.py)
```

```
B(TIMEOUT)
```

```
A --> B
```

```
B -->|30 seconds| C[Process]
```

```
C --> D[Output]
```

```
```
```

```
Module: constants.py
```

```
- Module Name: The module is named "constants.py".
```

```
- Primary Objectives: This module's purpose is to define the default endpoints for different services and the default AI model and wrapper. It serves as a centralized place for managing these constants, which are used throughout the application.
```

```
- Critical Functions: This module does not contain any functions or methods. It only defines constant values.
```

```
- Key Variables:
```

```
- `DEFAULT_ENDPOINTS`: This is a dictionary that maps service names to their default endpoints.
```

```
- `DEFAULT_OLLAMA_MODEL`: This is a string that specifies the default AI model.
```

```
- `DEFAULT_WRAPPER`: This is an instance of the default wrapper class.
```

```
- `DEFAULT_WRAPPER_NAME`: This is a string that specifies the name of the default wrapper.
```

```
- Interdependencies: This module is dependent on the `airoboros` module from
`memgpt.local_llm.llm_chat_completion_wrappers`.
```

```
- Core vs. Auxiliary Operations: As this module only defines constants, it does not have any operations.
```

- **Operational Sequence**: There is no operational sequence in this module as it only defines constants.
- **Performance Aspects**: Since this module only contains constant definitions, it does not have significant performance considerations.
- **Reusability**: This module is highly reusable. The constants defined in this module can be imported and used in any other module that requires these values.
- **Usage**: Other modules import this module when they need to use the constants it defines. For example, a module that needs to make a request to one of the services would import `DEFAULT\_ENDPOINTS` and use it to get the endpoint for the service.
- **Assumptions**: It is assumed that the endpoints and the AI model specified in this module are correct and available. If these values are incorrect or the services or model are not available, it could cause errors in other parts of the application that use these constants.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
subgraph constants.py
```

```
koboldcpp["koboldcpp: http://localhost:5001"]
```

```
llamacpp["llamacpp: http://localhost:8080"]
```

```
lmstudio["lmstudio: http://localhost:1234"]
```

```
ollama["ollama: http://localhost:11434"]
```

```
webui-legacy["webui-legacy: http://localhost:5000"]
```

```
webui["webui: http://localhost:5000"]
```


end

subgraph DEFAULT_WRAPPER

airoboros["airoboros-l2-70b-2.1"]

end

koboldcpp -->|Data Flow| airoboros

llamacpp -->|Data Flow| airoboros

lmstudio -->|Data Flow| airoboros

ollama -->|Data Flow| airoboros

webui-legacy -->|Data Flow| airoboros

webui -->|Data Flow| airoboros

...

Module: constants.py

- **Module Name**: constants.py

- **Primary Objectives**: This module is designed to store and manage constants, including directory paths, model names, message strings, token limits, memory limits, and function parameters. It provides a centralized location for managing these constants, reducing the likelihood of errors and making the code easier to maintain.

- **Critical Functions**: This module does not contain any functions. It only declares and initializes constants.

- **Key Variables**: Some of the key variables include:

- `MEMGPT_DIR`: Directory path for memgpt.

- `DEFAULT_MEMGPT_MODEL`: Default model used for memgpt.

- `LLM_MAX_TOKENS`: Dictionary that maps models to their maximum token limit.

- `MESSAGE_SUMMARY_WARNING_FRAC`, `MESSAGE_SUMMARY_TRUNC_TOKEN_FRAC`, and

`MESSAGE_SUMMARY_TRUNC_KEEP_N_LAST`: Constants for conversation length and truncation.

- `CORE_MEMORY_PERSONA_CHAR_LIMIT` and `CORE_MEMORY_HUMAN_CHAR_LIMIT`: Constants for memory limits.

- `RETRIEVAL_QUERY_DEFAULT_PAGE_SIZE`: Default page size for retrieval queries.

- **Interdependencies**: This module does not interact with other system components directly. However, the constants defined here are likely used across the system, creating indirect dependencies.

- **Core vs. Auxiliary Operations**: All operations in this module are auxiliary since they support the core functionalities of the system by providing constants.

- **Operational Sequence**: Not applicable as this module does not contain any operational flow.

- **Performance Aspects**: This module does not have any direct impact on performance. However, the constants defined here, such as token limits or memory limits, can indirectly affect the system's performance.

- **Reusability**: This module is highly reusable. The constants defined here can be imported and used in any other module in the system.

- **Usage**: This module is used to provide constants to the rest of the system. Other modules import the required constants from this module.

- **Assumptions**: The module assumes that the directory in which memgpt is stored and the default model will not change. It also assumes that the token limits for the models are fixed.

Mermaid Diagram

```mermaid

graph TB

A((User)) -->|Request| B[constants.py]

B --> C{MEMGPT\_DIR}

B --> D{DEFAULT\_MEMGPT\_MODEL}

B --> E{FIRST\_MESSAGE\_ATTEMPTS}

B --> F{INITIAL\_BOOT\_MESSAGE}

B --> G{INITIAL\_BOOT\_MESSAGE\_SEND\_MESSAGE\_THOUGHT}

B --> H{STARTUP\_QUOTES}

B --> I{INITIAL\_BOOT\_MESSAGE\_SEND\_MESSAGE\_FIRST\_MSG}

B --> J{LLM\_MAX\_TOKENS}

B --> K{MESSAGE\_SUMMARY\_WARNING\_FRAC}

B --> L{MESSAGE\_SUMMARY\_WARNING\_STR}

B --> M{MESSAGE\_SUMMARY\_TRUNC\_TOKEN\_FRAC}

B --> N{MESSAGE\_SUMMARY\_TRUNC\_KEEP\_N\_LAST}

B --> O{CORE\_MEMORY\_PERSONA\_CHAR\_LIMIT}

B --> P{CORE\_MEMORY\_HUMAN\_CHAR\_LIMIT}

B --> Q{MAX\_PAUSE\_HEARTBEATS}

B --> R{MESSAGE\_CHATGPT\_FUNCTION\_MODEL}

B --> S{MESSAGE\_CHATGPT\_FUNCTION\_SYSTEM\_MESSAGE}

B --> T{REQ\_HEARTBEAT\_MESSAGE}

B --> U{FUNC\_FAILED\_HEARTBEAT\_MESSAGE}

B --> V{FUNCTION\_PARAM\_NAME\_REQ\_HEARTBEAT}

B --> W{FUNCTION\_PARAM\_TYPE\_REQ\_HEARTBEAT}

B --> X{FUNCTION\_PARAM\_DESCRIPTION\_REQ\_HEARTBEAT}

B --> Y{RETRIEVAL\_QUERY\_DEFAULT\_PAGE\_SIZE}

B -->|Response| A

'''

## Module: constants.py

Module Name: constants.py

**Primary Objectives:** This module is designed to store constant values that are used throughout the application. This can include configuration settings, default values, and any other values that remain consistent across the application.

**Critical Functions:** As this is a constants file, it does not contain any functions or methods. Its primary role is to store static data.

**Key Variables:**

- `DEFAULT_PORT`: This variable is used to define the default port on which the application will run.

- `CLIENT_TIMEOUT`: This variable is used to define the maximum amount of time the application will wait for a client response before timing out.

**Interdependencies:** This module interacts with any other modules or components that require the use of these constants. These could be networking modules, client modules, server modules, etc.

**Core vs. Auxiliary Operations:** The operations of this module are auxiliary, as it does not perform any core functionalities but provides support to them by supplying constant values.

**Operational Sequence:** There is no distinct flow in this module as it only contains static data.

**Performance Aspects:** This module does not have any direct impact on performance. However, the values of the constants can indirectly affect the performance of the modules that use them. For example, a lower `CLIENT_TIMEOUT` could make the application seem more responsive at the risk of prematurely timing out slower clients.

**\*\*Reusability\*\***: This module is highly reusable. The constants defined in this module can be imported and used in any other module within the application. Changes to the constants will also be reflected in all modules that import them.

**\*\*Usage\*\***: This module is used by importing the required constants into another module. For example, `from constants import DEFAULT\_PORT`.

**\*\*Assumptions\*\***: It is assumed that the values of `DEFAULT\_PORT` and `CLIENT\_TIMEOUT` are suitable for the application's needs and that any changes to these values are made with an understanding of their impact on the rest of the application.

**## Mermaid Diagram**

```
```mermaid
graph LR
    A[constants.py] --> B[DEFAULT_PORT]
    A --> C[CLIENT_TIMEOUT]
    B --> D[Server]
    C --> E[Client]
    D --> F[Application]
    E --> F
```
```

db.py\_Doc.md (AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\db.py\_Doc.md):

**## Module: db.py**

- **\*\*Module Name\*\***: db.py

- **\*\*Primary Objectives\*\***: This module is designed to provide database connectivity and operations for a system, likely an AI model, that works with textual passages. It supports two types of database connectors: PostgresStorageConnector and LanceDBConnector.

- **Critical Functions**:

- `get_db_model(table_name: str)`: Generates a SQLAlchemy model for the provided table name.
- `PostgresStorageConnector`: A class that provides methods for connecting to a PostgreSQL database and performing CRUD operations.
- `LanceDBConnector`: A class that provides methods for connecting to a LanceDB database and performing CRUD operations.

- **Key Variables**:

- `table_name`: The name of the table in the database.
- `config`: An instance of the MemGPTConfig class.
- `engine`: SQLAlchemy engine instance for database connectivity.
- `Session`: SQLAlchemy sessionmaker instance for database session management.

- **Interdependencies**: This module relies on several external libraries such as SQLAlchemy, psycopg, pgvector, and lancedb for database operations. It also uses MemGPTConfig and StorageConnector from the memgpt module.

- **Core vs. Auxiliary Operations**: Core operations include creating database models, establishing database connections, and performing CRUD operations. Auxiliary operations include sanitizing table names and listing loaded data.

- **Operational Sequence**: The typical sequence of operations would involve initializing a database connector (either PostgresStorageConnector or LanceDBConnector), specifying the table name, and then performing the desired database operations (insertion, retrieval, deletion, etc.).

- **Performance Aspects**: The module uses pagination to retrieve records, which can help manage memory usage when dealing with large datasets. It also uses SQLAlchemy's sessionmaker for efficient database session management.

- **Reusability**: The module is highly reusable. The database model and connector classes can be used with different table names

and configurations, making them adaptable for various database schemas and systems.

- **Usage**: This module is used whenever the system needs to interact with a database, whether it's to store, retrieve, update, or delete data.

- **Assumptions**: The module assumes that the database URI is provided in the MemGPTConfig. It also assumes that the Postgres database has the vector extension installed, and that the LanceDB database is accessible via the provided URI.

## ## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[PostgresStorageConnector] -- insert --> B((Database))
```

```
A -- get --> B
```

```
A -- delete --> B
```

```
A -- query --> B
```

```
A -- get_all --> B
```

```
C[LanceDBConnector] -- insert --> B
```

```
C -- get --> B
```

```
C -- delete --> B
```

```
C -- query --> B
```

```
C -- get_all --> B
```

```
...
```

dolphin.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\dolphin.py_Doc.md):

Module: dolphin.py

- **Module Name**: dolphin.py

- **Primary Objectives**: This module is a wrapper for Dolphin 2.1 Mistral 7b, which is a language model. The module is designed to format prompts that only generate JSON and no inner thoughts.

- **Critical Functions**:

- `__init__`: Initializes the Dolphin21MistralWrapper class with several parameters.
- `chat_completion_to_prompt`: Converts chat completion to a prompt.
- `create_function_description`: Creates a function description in airorobos style.
- `create_function_call`: Converts ChatCompletion to Airoboros style function trace (in prompt).
- `clean_function_args`: Cleans function arguments.
- `output_to_chat_completion_response`: Turns raw LLM output into a ChatCompletion style response.

- **Key Variables**:

- `simplify_json_content`: Simplify the JSON content or not.
- `clean_func_args`: Clean function arguments or not.
- `include_assistant_prefix`: Include assistant prefix or not.
- `include_opening_brance_in_prefix`: Include opening brace in prefix or not.
- `include_section_separators`: Include section separators or not.

- **Interdependencies**: This module interacts with the `wrapper_base` and `json_parser` modules, as well as the `errors` module in the parent directory.

- **Core vs. Auxiliary Operations**: Core operations include creating function descriptions, cleaning function arguments, and converting outputs to chat completion responses. Auxiliary operations include initializing the class and formatting the prompt.

- **Operational Sequence**: The module begins by initializing the class and its parameters. It then converts chat completions to

prompts, creates function descriptions, cleans function arguments, and finally converts outputs to chat completion responses.

- **Performance Aspects**: This module is designed for performance and efficiency, as it includes functions for cleaning arguments and simplifying JSON content.

- **Reusability**: This module can be reused in different contexts where Dolphin 2.1 Mistral 7b wrapper is needed.

- **Usage**: The module is used by calling the Dolphin21MistralWrapper class and using its functions to work with the Dolphin 2.1 Mistral 7b language model.

- **Assumptions**: The module assumes that the input will be in a specific format, and it includes error handling to deal with scenarios where the input does not meet these assumptions.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
User[User] -->|Input Data| System[System]
```

```
System -->|Process Data| Processing[Processing]
```

```
Processing -->|Output Data| User
```

```
```
```

embeddings.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\embeddings.py_Doc.md):

Module: embeddings.py

- **Module Name**: The module name is `embeddings.py`.

- **Primary Objectives**: The purpose of this module is to return the LlamaIndex embedding model to be used for embeddings. It

supports different types of embedding endpoints including OpenAI, Azure, and Hugging Face.

- **Critical Functions**: The main function in this module is `embedding_model()`. This function loads the configuration, checks the type of embedding endpoint (OpenAI, Azure, or default to Hugging Face), and returns the corresponding embedding model.

- **Key Variables**:

- `config`: Holds the loaded configuration.

- `endpoint`: Stores the type of embedding endpoint.

- `model`: The embedding model to be used.

- **Interdependencies**: This module interacts with other system components such as `typer`, `os`, `llama_index.embeddings`, `memgpt.config`, and potentially `HuggingFaceEmbedding`.

- **Core vs. Auxiliary Operations**: The core operation is the creation and return of the appropriate embedding model based on the configuration. The auxiliary operations include loading the configuration and setting the environment variable for Hugging Face.

- **Operational Sequence**: The function first loads the configuration, then checks the type of embedding endpoint. If it's OpenAI or Azure, it returns the corresponding embedding model. If not, it defaults to the Hugging Face model.

- **Performance Aspects**: The performance of this module depends on the efficiency of the chosen embedding model and the speed of the API endpoints.

- **Reusability**: This module is highly reusable as it allows for the flexible selection of an embedding model based on the configuration.

- **Usage**: This module is used whenever an embedding model is needed. The type of model returned is determined by the

`embedding_endpoint_type` in the configuration.

- **Assumptions**: The module assumes that the configuration loaded correctly and that the specified embedding endpoint type is supported. It also assumes that the necessary API keys and endpoints are correctly provided in the configuration.

Mermaid Diagram

```
```mermaid
graph LR
 A[embeddings.py] -->|import| B[typer]
 A -->|import| C[os]
 A -->|import| D[lama_index.embeddings]
 A -->|function call| E[embedding_model]
 E -->|load config| F[MemGPTConfig.load]
 E -->|check endpoint| G{if endpoint == openai}
 G -->|True| H[OpenAIEmbedding]
 G -->|False| I{if endpoint == azure}
 I -->|True| J[OpenAIEmbedding]
 I -->|False| K[HuggingFaceEmbedding]
 ...
```

errors.py\_Doc.md (AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\errors.py\_Doc.md):

## Module: errors.py

- **Module Name**: The module is named `errors.py`.

- **Primary Objectives**: The primary purpose of this module is to define and handle various types of errors related to LLM (Local Link Manager). It provides a mechanism to raise and catch specific exceptions in the LLM context.

- **Critical Functions**: The main functions are the constructors (`__init__`) of the exception classes `LLMError`, `LLMJSONParsingError`, `LocalLLMError`, and `LocalLLMConnectionError`. They initialize the error messages for their respective exceptions.
- **Key Variables**: The key variable in this module is `self.message`, which stores the error message for each exception.
- **Interdependencies**: This module does not appear to interact directly with other system components, but it can be imported and used wherever error handling is necessary in the larger system context.
- **Core vs. Auxiliary Operations**: The core operations of this module are defining and initializing the exceptions. There do not appear to be any auxiliary operations.
- **Operational Sequence**: When an exception is raised, its `__init__` method is called, setting the `message` attribute. When the exception is caught, this message can be accessed and logged or displayed to provide information about the error.
- **Performance Aspects**: As this module is primarily related to error handling, its performance impact should be minimal. The main performance consideration is ensuring that exceptions are handled efficiently to avoid unnecessary disruptions to the program flow.
- **Reusability**: This module is highly reusable. The defined exceptions can be imported and used in any part of the system where LLM-related errors need to be handled.
- **Usage**: To use this module, import the required exceptions at the top of the Python file. When an error condition is detected, raise the appropriate exception. In the try/except block where the LLM operation is performed, catch the exception and handle it appropriately, such as by logging the error message and terminating the operation.
- **Assumptions**: The main assumption is that these exceptions will be raised and caught correctly in the rest of the system. It is also

assumed that the error messages provided are sufficient to understand and address the error.

## Mermaid Diagram

```
```mermaid
graph TD
    A[errors.py]
    B[LLMError]
    C[LLMJSONParsingError]
    D[LocalLLMError]
    E[LocalLLMConnectionError]

    A --> B
    B --> C
    B --> D
    B --> E
```
```

extras.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\extras.py\_Doc.md):

## Module: extras.py

- **Module Name**: extras.py
- **Primary Objectives**: This module is primarily designed to provide additional utility functions for interacting with the AI model, file handling, and generating HTTP requests.
- **Critical Functions**:
  - `message_chatgpt`: This function sends a message to a basic AI, ChatGPT, and gets a reply. It does not retain memory of

previous interactions.

- ``read_from_text_file``: This function reads lines from a text file, given a filename, starting line, and the number of lines to read.
- ``append_to_text_file``: This function appends content to a text file.
- ``http_request``: This function generates an HTTP request and returns the response.

- **Key Variables**:

- ``message_sequence`` in ``message_chatgpt``: It's a list that holds system and user messages.
- ``filename``, ``line_start``, ``num_lines`` in ``read_from_text_file``: These variables are used to specify the file and the lines to read.
- ``filename``, ``content`` in ``append_to_text_file``: These are used to specify the file and the content to append.
- ``method``, ``url``, ``payload_json`` in ``http_request``: These are used to specify the HTTP request details.

- **Interdependencies**: This module depends on the ``os``, ``json``, ``requests``, ``typing.Optional`` libraries, and ``memgpt.constants`` and ``memgpt.openai_tools`` modules.

- **Core vs. Auxiliary Operations**: Core operations include sending messages to ChatGPT, reading from a text file, appending to a text file, and generating HTTP requests. Auxiliary operations include validation and error handling within these operations.

- **Operational Sequence**: Each function in the module can be used independently as per requirements. The sequence of operations would depend on the specific use case.

- **Performance Aspects**: The performance of this module depends on the efficiency of the I/O operations (file and HTTP requests) and the response time of the ChatGPT model.

- **Reusability**: Each function in the module is designed to be reusable in various scenarios - interacting with ChatGPT, handling text files, and making HTTP requests.

- **Usage**: This module is used when there's a need to interact with the ChatGPT model, perform file operations, or generate HTTP requests.

- **Assumptions**:

- The file paths provided exist and are accessible.
- The message sent to ChatGPT is a full English sentence.
- The HTTP method provided is valid and the URL is accessible.
- For GET requests, the payload is ignored.
- The payload for non-GET requests is a valid JSON string.

## Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[extras.py]
```

```
B[typing]
```

```
C[os]
```

```
D[json]
```

```
E[requests]
```

```
F[memgpt.constants]
```

```
G[memgpt.openai_tools]
```

```
A --> B
```

```
A --> C
```

```
A --> D
```

```
A --> E
```

```
A --> F
```

```
A --> G
```

...

functions.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\functions.py_Doc.md):

Module: functions.py

- **Module Name**: The module name is `functions.py`.

- **Primary Objectives**: This module's purpose is to load and manage sets of functions. It provides a way to load functions from a module, generate a JSON schema for them, and handle them in a dictionary. It also allows loading all function sets from a directory, including user-provided and built-in ones.

- **Critical Functions**:

- `load_function_set(module)`: This function loads the functions from a given module and generates a schema for each of them.

- `load_all_function_sets(merge=True)`: This function loads all function sets from a directory. It can merge all functions from all sets into the same level dict or return a nested dict where the top level is organized by the function set name.

- **Key Variables**:

- `function_dict`: A dictionary that stores the functions and their generated schema from a module.

- `schemas_and_functions`: A dictionary that stores the function sets and their associated functions and schemas.

- **Interdependencies**: This module interacts with other components such as `schema_generator` from `memgpt.functions` and `MEMGPT_DIR` from `memgpt.constants`. It also interacts with Python's built-in modules like `os`, `sys`, `importlib`, and `inspect`.

- **Core vs. Auxiliary Operations**: The core operations include loading function sets from a module and generating their schemas. Auxiliary operations include handling exceptions and validating the uniqueness of function names.

- **Operational Sequence**: The module first defines the paths of the scripts and function sets directories. It then lists all Python files in these directories. The module then iterates over these files, imports the modules, and loads the function sets. If the ``merge`` parameter is set to ``True``, it will merge all functions from all sets into the same level dict.

- **Performance Aspects**: The module is designed to efficiently load and manage function sets. However, the performance may be affected when dealing with a large number of function sets or large modules.

- **Reusability**: The module is highly reusable. The functions ``load_function_set`` and ``load_all_function_sets`` can be used to load and manage function sets from any module or directory.

- **Usage**: This module is used to load and manage function sets. It is particularly useful in projects where functions are organized in modules and directories, and there is a need to dynamically load and handle these functions.

- **Assumptions**: The module assumes that all function names within a set are unique. It also assumes that the directories and files it interacts with exist and are accessible.

Mermaid Diagram

```mermaid

graph TB

A[functions.py] -->|import| B[importlib, inspect, os, sys]

A -->|import| C[schema\_generator]

A -->|import| D[MEMGPT\_DIR]

A -->|append path| E[sys.path]

F[load\_function\_set] -->|load functions and generate schema| G[function\_dict]

H[load\_all\_function\_sets] -->|load all function sets| I[schemas\_and\_functions]

J[User Scripts] --> H

K[Built-in Scripts] --> H

L[merge] --> M[merged\_functions]

'''

generate\_embeddings\_for\_docs.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\generate\_embeddings\_for\_docs.py\_

Doc.md):

## Module: generate\_embeddings\_for\_docs.py

- **Module Name**: The module name is `generate\_embeddings\_for\_docs.py`.

- **Primary Objectives**: The primary objective of this module is to generate embeddings for documents. It reads the documents from a file, processes them, and generates embeddings using OpenAI's API.

- **Critical Functions**:

- `generate\_requests\_file(filename)`: This function generates a file of requests which can be fed to the OpenAI API to generate embeddings.

- `generate\_embedding\_file(filename, parallel\_mode)`: This function generates the embeddings for the documents in the file. It can work in parallel mode or sequential mode.

- `main()`

## Mermaid Diagram

```mermaid

graph TD

A[generate_embeddings_for_docs.py] --> B[generate_requests_file]

B --> C[process_api_requests_from_file]

B --> D[generate_embedding_file]

D --> E[async_get_embedding_with_backoff]

E --> F[Save Embeddings]

...

gpt_functions.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\gpt_functions.py_Doc.md):

Module: gpt_functions.py

Mermaid Diagram

```mermaid

graph LR

User --> send\_message

User --> pause\_heartbeats

User --> message\_chatgpt

User --> core\_memory\_append

User --> core\_memory\_replace

User --> recall\_memory\_search

User --> conversation\_search

User --> recall\_memory\_search\_date

User --> conversation\_search\_date

User --> archival\_memory\_insert

User --> archival\_memory\_search

User --> read\_from\_text\_file

User --> append\_to\_text\_file

User --> http\_request

...

gpt\_summarize.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\gpt\_summarize.py\_Doc.md):

## Module: gpt\_summarize.py

- **Module Name**: The module is named `gpt\_summarize.py`.
- **Primary Objectives**: This module's purpose is to summarize a history of previous messages in a conversation between an AI persona and a human. The summary is from the AI's perspective and must be less than a given word limit.
- **Critical Functions**: The main function of this module is to generate a summary of the conversation. However, the specific functions/methods aren't provided in the given context.
- **Key Variables**: The key variable is `WORD\_LIMIT`, which determines the maximum length of the summary.
- **Interdependencies**: The module interacts with the conversation history and the AI's messages. It also relies on the system's ability to distinguish between different roles ('assistant', 'user', 'function') and events (login, heartbeat).
- **Core vs. Auxiliary Operations**: The core operation is the summarization of the conversation. Auxiliary operations could include parsing the conversation, identifying the roles and messages, and ensuring the word limit isn't exceeded.
- **Operational Sequence**: The module likely begins by parsing the conversation history, identifying the roles and messages, then generates a summary from the AI's perspective, and finally ensures the summary doesn't exceed the word limit.
- **Performance Aspects**: Performance considerations may include the efficiency of the summarization algorithm and the ability to process large conversation histories within the word limit.
- **Reusability**: This module could potentially be reused for summarizing any conversation, provided the conversation follows the same structure of roles and messages.

- **Usage**: This module is used to generate a concise summary of a conversation between an AI and a human, useful for understanding the context and content of the conversation without needing to read the entire conversation history.

- **Assumptions**: The module assumes that the AI's messages are marked with the 'assistant' role, function outputs are marked with the 'function' role, and user messages and system events are marked with the 'user' role. It also assumes that the conversation follows a certain structure and that the AI's inner monologue is not visible to the user.

gpt\_system.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\gpt\_system.py\_Doc.md):

## Module: gpt\_system.py

Module Name: gpt\_system.py

Primary Objectives: The primary objective of this module is to retrieve system text based on a given key.

Critical Functions:

1. `get_system_text(key)`: This function takes a key as input and retrieves the corresponding system text. It first checks if the text file exists in the "prompts/system/" directory. If the file exists, it reads the content of the file and returns it. If the file does not exist in the "prompts/system/" directory, it checks in the "~/.memgpt/system\_prompts/" directory. If the file is found in the "~/.memgpt/system\_prompts/" directory, it reads the content of the file and returns it. If the file is not found in either directory, it raises a `FileNotFoundError`.

Key Variables:

- `filename`: Stores the name of the text file based on the given key.

- `file_path`: Stores the path of the text file.

- `user_system_prompts_dir`: Stores the path of the "~/.memgpt/system\_prompts/" directory.

Interdependencies: This module depends on the ``os`` module and the ``MEMGPT_DIR`` constant from the ``memgpt.constants`` module.

Core vs. Auxiliary Operations: The core operation of this module is the ``get_system_text()`` function, which retrieves the system text.

There are no auxiliary operations in this module.

Operational Sequence: The operational sequence of this module is as follows:

1. Check if the text file exists in the "prompts/system/" directory.
2. If the file exists, read the content and return it.
3. If the file does not exist in the "prompts/system/" directory, check in the "~/.memgpt/system\_prompts/" directory.
4. If the file is found, read the content and return it.
5. If the file is not found in either directory, raise a `FileNotFoundError`.

Performance Aspects: The performance of this module depends on the size of the text files and the efficiency of file operations.

Reading the content of large text files may impact performance.

Reusability: This module can be reused in any system that requires retrieving system text based on keys. It can be easily integrated into different codebases.

Usage: This module is used to retrieve system text by providing a key as input. It can be used in various applications where dynamic system text is required.

Assumptions: This module assumes that the text files exist in either the "prompts/system/" directory or the "~/.memgpt/system\_prompts/" directory. It also assumes that the user has the necessary permissions to read the files.

## Mermaid Diagram

```
```mermaid
```

graph TD

A[User] -->|Input| B[get_system_text Function]

B --> C{File Exists in system directory?}

C -->|Yes| D[Read File]

C -->|No| E{File Exists in user_system_prompts_dir?}

E -->|Yes| F[Read File]

E -->|No| G[FileNotFoundError]

D --> H[Return File Content]

F --> H

...

High_Level_Doc-1.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-1.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 455.796875 73" style="max-width: 455.797px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
```

```
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M46.796875,22.94301204819277L56.40625,20.660843373493975C66.015625,18.37867469879518,85.234375,13.81433734939
```


759,103.58917771587461,13.395198449644981C121.94398043174924,12.976059549892375,139.43483586349848,16.702119099

784746,148.1802635793731,18.565148874730934L156.92569129524773,20.42817864967712"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-A" id="L-B-A-0"

d="M162.109375,35.46754636233952L152.5,37.51462196861627C142.890625,39.56169757489301,123.671875,43.655848787446

51,105.31255345040488,43.6248647987158C86.95323190080977,43.59388080998508,69.45333880161952,39.43776161997017,6

0.7033922520244,37.35970202496271L51.95344570242928,35.281642429955255"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-C" id="L-B-C-0"

d="M227.5234375,22.114347688284933L238.50520833333334,19.970289740237444C249.48697916666666,17.826231792189954,

271.4505208333333,13.538115896094979,292.54490891172884,13.228181748557825C313.63929699012436,12.91824760102067

4,333.8645314802487,16.58649520204135,343.9771487253109,18.420619002551685L354.08976597037304,20.25474280306202

2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-C LE-B" id="L-C-B-0"

d="M359.3046875,35.799427698649296L348.3229166666667,37.791189748874416C337.34114583333333,39.78295179909953,315

.3776041666667,43.76647589954977,294.28102695485217,43.78344432697249C273.18444974303765,43.80041275439521,252.9

548369860753,39.85082550879042,242.84003060759412,37.87603188598803L232.72522422911294,35.90123826318563"/></g><

g class="edgeLabels"><g transform="translate(104.453125, 9.25)" class="edgeLabel"><g transform="translate(-28.296875, -9.25)"

class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Request</div></foreignObject></g></g><g

transform="translate(104.453125, 47.75)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"

class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Response</div></foreignObject></g></g><g

transform="translate(293.4140625, 9.25)" class="edgeLabel"><g transform="translate(-40.890625, -9.25)"

class="label"><foreignObject height="18.5" width="81.78125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Read/Write</div></foreignObject></g></g><g

```
transform="translate(293.4140625, 47.75)" class="edgeLabel"><g transform="translate(-16.484375, -9.25)"  
class="label"><foreignObject height="18.5" width="32.96875"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data</span></div></foreignObject></g></g></g><g  
class="nodes"><g transform="translate(23.3984375, 28.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect  
height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(194.81640625, 28.5)" id="flowchart-B-1"  
class="node default default flowchart-label"><rect height="33.5" width="65.4140625" y="-16.75" x="-32.70703125" ry="0" rx="0"  
style="" class="basic label-container"/><g transform="translate(-25.20703125, -9.25)" style="" class="label"><rect/><foreignObject  
height="18.5" width="50.4140625"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">System</span></div></foreignObject></g></g><g  
transform="translate(399.55078125, 28.5)" id="flowchart-C-5" class="node default default flowchart-label"><rect height="33.5"  
width="80.4921875" y="-16.75" x="-40.24609375" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-32.74609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="65.4921875"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">Database</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-10.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-10.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 624.263671875 522.5"
```

style="max-width: 624.264px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"

```
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
```

```
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
```

```
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
```

```
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
```

```
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 10
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
```

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0" d="M224.46875,33.5L224.46875,37.666666666666664C224.46875,41.833333333333336,224.46875,50.166666666666664,224.46875,57.616666666666667C224.46875,65.066666666666666,224.46875,71.633333333333334,224.46875,74.91666666666667L224.46875,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0" d="M162.3567325367647,117L141.1892041973039,122.70833333333333C120.02167585784314,128.41666666666666,77.68661917892156,139.83333333333334,56.51909083946078,150.36666666666667C35.3515625,160.9,35.3515625,170.54999999999998,35.3515625,175.375L35.3515625,180.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0" d="M203.336243872549,117L196.13436989379082,122.70833333333333C188.93249591503266,128.41666666666666,174.52874795751632,139.83333333333334,167.32687397875816,150.36666666666667C160.125,160.9,160.125,170.54999999999998,160.125,175.375L160.125,180.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0" d="M245.601256127451,117L252.80313010620918,122.70833333333333C260.0050040849673,128.41666666666666,274.4087520424837,139.83333333333334,281.61062602124184,150.36666666666667C288.8125,160.9,288.8125,170.54999999999998,288.8125,175.375L288.8125,180.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-F" id="L-B-F-0" d="M293.2815372242647,117L316.7326612285539,122.70833333333333C340.18378523284315,128.41666666666666,387.08603324142155,139.83333333333334,410.53715724571083,150.36666666666667C433.98828125,160.9,433.98828125,170.54999999999998,433.98828125,175.375L433.98828125,180.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-G" id="L-F-G-0"

d="M433.98828125,219L433.98828125,224.70833333333334C433.98828125,230.41666666666666,433.98828125,241.83333333333334,433.98828125,252.36666666666667C433.98828125,262.90000000000003,433.98828125,272.55,433.98828125,277.375L433.98828125,282.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-H" id="L-G-H-0"

d="M404.89708754595586,321L394.98292451746323,326.70833333333333C385.06876148897055,332.41666666666667,365.2404354319853,343.83333333333333,355.3262724034926,354.36666666666666C345.412109375,364.90000000000003,345.412109375,374.55,345.412109375,379.375L345.412109375,384.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-I" id="L-G-I-0"

d="M463.07947495404414,321L472.99363798253677,326.70833333333333C482.90780101102945,332.41666666666667,502.7361270680147,343.83333333333333,512.6502900965073,354.36666666666666C522.564453125,364.90000000000003,522.564453125,374.55,522.564453125,379.375L522.564453125,384.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H LE-J" id="L-H-J-0"

d="M345.412109375,423L345.412109375,427.16666666666667C345.412109375,431.33333333333333,345.412109375,439.66666666666667,354.0730471308428,447.91562932391554C362.7339848866856,456.16459198116445,380.0558603983711,464.32918396232895,388.7167981542139,468.4114799529112L397.3777359100567,472.49377594349346"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-J" id="L-I-J-0"

d="M522.564453125,423L522.564453125,427.16666666666667C522.564453125,431.33333333333333,522.564453125,439.66666666666667,513.9035153691572,447.91562932391554C505.2425776133144,456.16459198116445,487.9207021016289,464.32918396232895,479.2597643457861,468.4114799529112L470.5988265899433,472.49377594349346"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
transform="translate(433.98828125, 151.25)" class="edgeLabel"><g transform="translate(-44.64453125, -9.25)"
class="label"><foreignObject height="18.5" width="89.2890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">post request</div></foreignObject></g></g><g
transform="translate(433.98828125, 253.25)" class="edgeLabel"><g transform="translate(-31.43359375, -9.25)"
class="label"><foreignObject height="18.5" width="62.8671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">response</div></foreignObject></g></g><g
transform="translate(345.412109375, 355.25)" class="edgeLabel"><g transform="translate(-71.453125, -9.25)"
class="label"><foreignObject height="18.5" width="142.90625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">if status code is 200</div></foreignObject></g></g><g
transform="translate(522.564453125, 355.25)" class="edgeLabel"><g transform="translate(-85.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="171.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">if status code is not 200</div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(224.46875, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="59.5625" y="-16.75" x="-29.78125" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-22.28125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="44.5625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">api.py</div></foreignObject></g></g><g transform="translate(224.46875, 100.25)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="208.8046875" y="-16.75" x="-104.40234375" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-96.90234375, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="193.8046875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">get_koboldcpp_completion</div></foreignObject></g></g><g transform="translate(35.3515625, 202.25)"

id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5" width="70.703125" y="-16.75" x="-35.3515625"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.8515625, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="55.703125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">settings</div></foreignObject></g></g><g

transform="translate(160.125, 202.25)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5"

width="78.84375" y="-16.75" x="-39.421875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-31.921875, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="63.84375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">grammar</div></foreignObject></g></g><g transform="translate(288.8125, 202.25)" id="flowchart-E-4"

class="node default default flowchart-label"><rect height="33.5" width="78.53125" y="-16.75" x="-39.265625" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-31.765625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"

width="63.53125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">endpoint</div></foreignObject></g></g><g transform="translate(433.98828125, 202.25)"

id="flowchart-F-5" class="node default default flowchart-label"><rect height="33.5" width="111.8203125" y="-16.75"

x="-55.91015625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-48.41015625, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="96.8203125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">requests.post</div></foreignObject></g></g><g

transform="translate(433.98828125, 304.25)" id="flowchart-G-6" class="node default default flowchart-label"><rect height="33.5"

width="77.8671875" y="-16.75" x="-38.93359375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-31.43359375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="62.8671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">response</div></foreignObject></g></g><g transform="translate(345.412109375, 406.25)"

id="flowchart-H-7" class="node default default flowchart-label"><rect height="33.5" width="56.2265625" y="-16.75" x="-28.11328125"

```

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-20.61328125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="41.2265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">result</span></div></foreignObject></g></g><g
transform="translate(522.564453125, 406.25)" id="flowchart-I-8" class="node default default flowchart-label"><rect height="33.5"
width="85.3828125" y="-16.75" x="-42.69140625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-35.19140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="70.3828125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Exception</span></div></foreignObject></g></g><g transform="translate(433.98828125, 489.75)"
id="flowchart-J-9" class="node default default flowchart-label"><rect height="33.5" width="63.6328125" y="-16.75" x="-31.81640625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-24.31640625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="48.6328125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">DEBUG</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-11.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-11.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 328.7890625 457.5" style="max-width:
328.789px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node

```



```
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
```

```
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M165.583984375,33.5L165.583984375,39.208333333333336C165.583984375,44.916666666666664,165.583984375,56.333333
333333336,165.583984375,66.866666666666666C165.583984375,77.39999999999999,165.583984375,87.05,165.583984375,91.87
5L165.583984375,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"
d="M135.86158662683823,135.5L125.73231177236521,141.20833333333334C115.60303691789215,146.91666666666666,95.344
48720894608,158.33333333333334,85.21521235447304,168.86666666666667C75.0859375,179.4,75.0859375,189.04999999999
98,75.0859375,193.875L75.0859375,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"
d="M195.30638212316177,135.5L205.4356569776348,141.20833333333334C215.56493183210785,146.91666666666666,235.823
4815410539,158.33333333333334,245.95275639552696,168.86666666666667C256.08203125,179.4,256.08203125,189.04999999
999998,256.08203125,193.875L256.08203125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"
d="M256.08203125,237.5L256.08203125,243.20833333333334C256.08203125,248.91666666666666,256.08203125,260.33333333
33333,256.08203125,270.86666666666667C256.08203125,281.40000000000003,256.08203125,291.05,256.08203125,295.875L256.
08203125,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"
d="M256.08203125,339.5L256.08203125,345.2083333333333C256.08203125,350.91666666666667,256.08203125,362.3333333333
333,256.08203125,372.86666666666666C256.08203125,383.40000000000003,256.08203125,393.05,256.08203125,397.875L256.08
203125,402.7"/></g><g class="edgeLabels"><g transform="translate(165.583984375, 67.75)" class="edgeLabel"><g
transform="translate(-27.07421875, -9.25)" class="label"><foreignObject height="18.5" width="54.1484375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">request</span></div></foreignObject></g></g><g transform="translate(75.0859375, 169.75)"
class="edgeLabel"><g transform="translate(-27.8515625, -9.25)" class="label"><foreignObject height="18.5" width="55.703125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
```

class="edgeLabel">settings</div></foreignObject></g></g><g transform="translate(256.08203125, 169.75)"

class="edgeLabel"><g transform="translate(-27.07421875, -9.25)" class="label"><foreignObject height="18.5"

width="54.1484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">request</div></foreignObject></g></g><g transform="translate(256.08203125, 271.75)"

class="edgeLabel"><g transform="translate(-31.43359375, -9.25)" class="label"><foreignObject height="18.5"

width="62.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">response</div></foreignObject></g></g><g transform="translate(256.08203125, 373.75)"

class="edgeLabel"><g transform="translate(-20.61328125, -9.25)" class="label"><foreignObject height="18.5"

width="41.2265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">result</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(165.583984375,

16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="59.5625" y="-16.75" x="-29.78125"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-22.28125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="44.5625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">api.py</div></foreignObject></g></g><g

transform="translate(165.583984375, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"

width="178.1171875" y="-16.75" x="-89.05859375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-81.55859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="163.1171875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">get_webui_completion</div></foreignObject></g></g><g transform="translate(75.0859375, 220.75)"

id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="150.171875" y="-16.75" x="-75.0859375"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.5859375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="135.171875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">load_grammar_file</div></foreignObject></g></g><g

transform="translate(256.08203125, 220.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"

width="111.8203125" y="-16.75" x="-55.91015625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-48.41015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="96.8203125"><div

```

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">requests.post</span></div></foreignObject></g></g><g transform="translate(256.08203125, 322.75)"
id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="113.4140625" y="-16.75"
x="-56.70703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-49.20703125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="98.4140625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">response.json</span></div></foreignObject></g></g><g
transform="translate(256.08203125, 424.75)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5"
width="106.0390625" y="-16.75" x="-53.01953125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-45.51953125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="91.0390625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">return
result</span></div></foreignObject></g></g></g></g></svg>

```

High_Level_Doc-12.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-12.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 837.7421875 133" style="max-width: 837.742px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
```

```

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

```

d="M59.5625,58.5L63.729166666666664,58.5C67.89583333333333,58.5,76.22916666666667,58.5,83.67916666666666,58.5C91.12916666666666,58.5,97.69583333333333,58.5,100.97916666666667,58.5L104.2625,58.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-BLE-C" id="L-B-C-0"

d="M248.07021893712576,41.75L259.71606786427145,37.583333333333336C271.3619167914172,33.416666666666664,294.6536146457086,25.083333333333332,313.44086982285427,20.916666666666668C332.22812500000003,16.75,346.5109375,16.75,353.65234375,16.75L360.79375,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M438.015625,16.75L446.0403645833333,16.75C454.0651041666667,16.75,470.1145833333333,16.75,481.42265625,16.75C492.73072916666666,16.75,499.2973958333334,16.75,502.5807291666667,16.75L505.8640625,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-DLE-E" id="L-D-E-0"

d="M582.7578125,16.75L586.9244791666666,16.75C591.0911458333334,16.75,599.4244791666666,16.75,606.8744791666667,16.75C614.3244791666667,16.75,620.8911458333333,16.75,624.1744791666666,16.75L627.4578125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ELE-F" id="L-E-F-0"

d="M713.0703125,16.75L717.2369791666666,16.75C721.4036458333334,16.75,729.7369791666666,16.75,737.1869791666667,16.75C744.6369791666666,16.75,751.2036458333333,16.75,754.4869791666666,16.75L757.7703125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-BLE-G" id="L-B-G-0"

d="M248.07021893712576,75.25L259.71606786427145,79.41666666666667C271.3619167914172,83.58333333333333,294.6536146457086,91.91666666666667,309.58279690618764,96.08333333333333C324.51197916666666,100.25,331.0786458333333,100.25,334.3619791666667,100.25L337.6453125,100.25"/></g><g class="edgeLabels"><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g transform="translate(29.78125, 58.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="59.5625" y="-16.75" x="-29.78125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-22.28125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="44.5625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">api.py</div></foreignObject></g></g><g transform="translate(201.25390625, 58.5)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="183.3828125" y="-16.75" x="-91.69140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-84.19140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="168.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">get_ollama_completion</div></foreignObject></g></g><g transform="translate(402.0546875, 16.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="71.921875" y="-16.75" x="-35.9609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.4609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="56.921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Settings</div></foreignObject></g></g><g transform="translate(546.9609375, 16.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="71.59375" y="-16.75" x="-35.796875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.296875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span


```
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
```

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stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"/><g class="edgeLabels"/><g class="nodes"><g transform="translate(-7.5, -8)" class="root"><g
class="clusters"><g id="base.py" class="cluster default flowchart-label"><rect height="688" width="529.3515625" y="8" x="8" ry="0"
rx="0" style=""/><g transform="translate(245.07421875, 8)" class="cluster-label"><foreignObject height="18.5"
width="55.203125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">base.py</span></div></foreignObject></g></g></g><g class="edgePaths"><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-0"
d="M256.46875,59.75L267.75520833333333,59.75C279.0416666666667,59.75,301.61458333333333,59.75,326.4059914801831,70.3
3023849051592C351.19739962703284,80.91047698103185,378.2072992540657,102.0709539620637,391.71224906758215,112.6
5119245257962L405.2171988810985,123.23143094309555"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
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7864583333335,310.25,341.16979166666664,310.25,345.4153645833333,310.25L349.6609375,310.25"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-B" id="L-E-B-0"
d="M285.19921875,143.25L291.697265625,143.25C298.1953125,143.25,311.19140625,143.25,325.48841145833336,143.25C339.
78541666666666,143.25,355.38333333333334,143.25,363.1822916666667,143.25L370.98125,143.25"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-B" id="L-F-B-0"
d="M285.70703125,226.75L292.1204427083333,226.75C298.5338541666667,226.75,311.3606770833333,226.75,331.2790383551
831,216.16976150948406C351.19739962703284,205.58952301896815,378.2072992540657,184.42904603793627,391.712249067
58215,173.8488075474204L405.2171988810985,163.26856905690445"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-H" id="L-G-H-0"
d="M278.796875,393.75L286.3619791666667,393.75C293.92708333333333,393.75,309.0572916666667,393.75,326.436842553836
87,397.59448622132095C343.81639344100705,401.4389724426419,363.4452868820142,409.1279448852838,373.259733602517
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77,412.97243110660474L383.0741803230213,416.8169173279257"/><path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-H" id="L-I-H-0"  
  
d="M299.1875,477.25L303.3541666666667,477.25C307.5208333333333,477.25,315.8541666666667,477.25,329.83528005383687,  
473.40551377867905C343.81639344100705,469.5610275573581,363.4452868820142,461.8720551147162,373.25973360251777,  
458.02756889339526L383.0741803230213,454.1830826720743"/><path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J LE-K" id="L-J-K-0"  
  
d="M292.10546875,560.75L297.4524739583333,560.75C302.7994791666667,560.75,313.4934895833333,560.75,328.6549415121  
702,564.594486221321C343.81639344100705,568.4389724426419,363.4452868820142,576.1279448852838,373.2597336025177  
7,579.9724311066047L383.0741803230213,583.8169173279257"/><path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-L LE-K" id="L-L-K-0"  
  
d="M294.81640625,644.25L299.7115885416667,644.25C304.6067708333333,644.25,314.3971354166667,644.25,329.1067644288  
3687,640.405513778679C343.81639344100705,636.5610275573581,363.4452868820142,628.8720551147162,373.259733602517  
77,625.0275688933953L383.0741803230213,621.1830826720743"/></g><g class="edgeLabels"><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
```

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(430.76953125, 143.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="108.9765625" y="-16.75" x="-54.48828125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.98828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="93.9765625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Core Memory</div></foreignObject></g></g><g transform="translate(166.09375, 59.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="180.75" y="-16.75" x="-90.375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-82.875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="165.75"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">send_message function</div></foreignObject></g></g><g transform="translate(166.09375, 310.25)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5" width="206.3359375" y="-16.75" x="-103.16796875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-95.66796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="191.3359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">pause_heartbeats function</div></foreignObject></g></g><g transform="translate(430.76953125, 310.25)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5" width="151.6171875" y="-16.75" x="-75.80859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-68.30859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="136.6171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Heartbeats Control</div></foreignObject></g></g><g transform="translate(166.09375, 143.25)" id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5" width="238.2109375" y="-16.75" x="-119.10546875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-111.60546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="223.2109375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">core_memory_append function</div></foreignObject></g></g><g transform="translate(166.09375,

226.75)" id="flowchart-F-6" class="node default default flowchart-label"><rect height="33.5" width="239.2265625" y="-16.75" x="-119.61328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-112.11328125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="224.2265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">core_memory_replace function</div></foreignObject></g></g><g transform="translate(166.09375, 393.75)" id="flowchart-G-8" class="node default default flowchart-label"><rect height="33.5" width="225.40625" y="-16.75" x="-112.703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-105.203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="210.40625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">conversation_search function</div></foreignObject></g></g><g transform="translate(430.76953125, 435.5)" id="flowchart-H-9" class="node default default flowchart-label"><rect height="33.5" width="163.1640625" y="-16.75" x="-81.58203125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-74.08203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="148.1640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Conversation History</div></foreignObject></g></g><g transform="translate(166.09375, 477.25)" id="flowchart-I-10" class="node default default flowchart-label"><rect height="33.5" width="266.1875" y="-16.75" x="-133.09375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-125.59375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="251.1875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">conversation_search_date function</div></foreignObject></g></g><g transform="translate(166.09375, 560.75)" id="flowchart-J-12" class="node default default flowchart-label"><rect height="33.5" width="252.0234375" y="-16.75" x="-126.01171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-118.51171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="237.0234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">archival_memory_insert function</div></foreignObject></g></g><g transform="translate(430.76953125, 602.5)" id="flowchart-K-13" class="node default default flowchart-label"><rect height="33.5" width="133.71875" y="-16.75" x="-66.859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-59.359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="118.71875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span


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ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M583.45703125,33.5L583.45703125,37.666666666666664C583.45703125,41.833333333333336,583.45703125,50.1666666666
66664,583.45703125,57.616666666666667C583.45703125,65.06666666666666,583.45703125,71.63333333333334,583.45703125,7
4.916666666666667L583.45703125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"
d="M523.4106006736527,117L508.47367764471056,121.16666666666667C493.5367546157684,125.33333333333333,463.662908
```

55788424,133.66666666666666,448.72598552894215,141.11666666666667C433.7890625,148.56666666666666,433.7890625,155.13333333333333,433.7890625,158.41666666666666L433.7890625,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M643.5034618263473,117L658.4403848552894,121.16666666666667C673.3773078842315,125.33333333333333,703.2511539421157,133.66666666666666,718.1880769710579,141.11666666666667C733.125,148.56666666666666,733.125,155.13333333333333,733.125,158.41666666666666L733.125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"

d="M576.46875,193.90485107441125L495.2337239583333,199.17070922867606C413.9986979166667,204.4365673829408,251.52864583333334,214.96828369147042,170.29361979166666,223.51747517906855C89.05859375,232.06666666666667,89.05859375,238.63333333333333,89.05859375,241.91666666666666L89.05859375,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-F" id="L-D-F-0"

d="M577.096744011976,200.5L538.2837450099801,204.66666666666666C499.470746007984,208.83333333333334,421.84474800399204,217.16666666666666,383.03174900199605,224.61666666666667C344.21875,232.06666666666667,344.21875,238.63333333333333,344.21875,241.91666666666666L344.21875,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-G" id="L-D-G-0"

d="M683.2323166167664,200.5L670.8212013473053,204.66666666666666C658.4100860778443,208.83333333333334,633.5878555389221,217.16666666666666,621.176740269461,224.61666666666667C608.765625,232.06666666666667,608.765625,238.63333333333333,608.765625,241.91666666666666L608.765625,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-H" id="L-D-H-0"

d="M783.0176833832336,200.5L795.4287986526947,204.66666666666666C807.8399139221557,208.83333333333334,832.6621444610779,217.16666666666666,845.073259730539,224.61666666666667C857.484375,232.06666666666667,857.484375,238.63333333333333,857.484375,241.91666666666666L857.484375,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-I" id="L-D-I-0"

d="M885.1929968188623,200.5L923.0208567240519,204.66666666666666C960.8487166292416,208.83333333333334,1036.5044364396208,217.16666666666666,1074.3322963448104,224.61666666666667C1112.16015625,232.06666666666667,1112.1601562

5,238.6333333333333,1112.16015625,241.9166666666666L1112.16015625,245.2"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-J" id="L-D-J-0"

d="M889.78125,194.2124796135797L967.8600260416666,199.42706634464972C1045.9388020833333,204.6416530757198,1202.
0963541666667,215.07082653785992,1280.1751302083333,223.5687466022633C1358.25390625,232.0666666666667,1358.2539
0625,238.6333333333333,1358.25390625,241.9166666666666L1358.25390625,245.2"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-K" id="L-E-K-0"

d="M89.05859375,284L89.05859375,288.1666666666667C89.05859375,292.3333333333333,89.05859375,300.6666666666667,18
8.8001777641688,310.0796868537936C288.5417617783377,319.4927070409205,488.02492980667535,329.98541408184093,587.
7665138208441,335.23176760230115L687.508097835013,340.47812112276137"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-K" id="L-F-K-0"

d="M344.21875,284L344.21875,288.1666666666667C344.21875,292.3333333333333,344.21875,300.6666666666667,401.4350640
6769956,309.2687129507808C458.65137813539906,317.87075923489493,573.0840062707982,326.7415184697899,630.3003203
384977,331.1768980872374L687.5166344061973,335.6122777046849"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-K" id="L-G-K-0"

d="M608.765625,284L608.765625,288.1666666666667C608.765625,292.3333333333333,608.765625,300.6666666666667,635.240
4071261765,308.8669532584174C661.715189252353,317.06723985016816,714.6647535047059,325.1344797003364,741.139535
6308825,329.16809962542044L767.614317757059,333.20171955050455"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H LE-K" id="L-H-K-0"

d="M857.484375,284L857.484375,288.1666666666667C857.484375,292.3333333333333,857.484375,300.6666666666667,859.552
2759607335,308.2446198695765C861.6201769214671,315.8225730724864,865.755978842934,322.6451461449728,867.8238798
036676,326.056432681216L869.891780764401,329.4677192174592"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-K" id="L-I-K-0"

d="M1112.16015625,284L1112.16015625,288.1666666666667C1112.16015625,292.3333333333333,1112.16015625,300.66666666

[illegible]

```
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="nodes"><g
transform="translate(583.45703125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="130.09375" y="-16.75" x="-65.046875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-57.546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="115.09375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">ChatCompletion</span></div></foreignObject></g></g><g transform="translate(583.45703125, 100.25)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="166.6796875" y="-16.75"
x="-83.33984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-75.83984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="151.6796875"><div style="display: inline-block; white-space: nowrap;"
```

xmlns="http://www.w3.org/1999/xhtml">get_chat_completion</div></foreignObject></g></g><g
transform="translate(433.7890625, 183.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"
width="185.359375" y="-16.75" x="-92.6796875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-85.1796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="170.359375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">get_available_wrappers</div></foreignObject></g></g><g transform="translate(733.125, 183.75)"
id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="313.3125" y="-16.75" x="-156.65625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-149.15625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="298.3125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">llm_wrapper.chat_completion_to_prompt</div></foreignObject></g></g><g
transform="translate(89.05859375, 267.25)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"
width="178.1171875" y="-16.75" x="-89.05859375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-81.55859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="163.1171875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">get_webui_completion</div></foreignObject></g></g><g transform="translate(344.21875, 267.25)"
id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="232.203125" y="-16.75" x="-116.1015625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-108.6015625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="217.203125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">get_webui_completion_legacy</div></foreignObject></g></g><g transform="translate(608.765625,
267.25)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="196.890625" y="-16.75"
x="-98.4453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-90.9453125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="181.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">get_lmstudio_completion</div></foreignObject></g></g><g transform="translate(857.484375, 267.25)"

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-15.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 277.40234375 3211.5"
style="max-width: 277.402px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
```

```
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-User LE-run" id="L-User-run-0"
d="M162.33203125,33.5L162.33203125,39.208333333333336C162.33203125,44.916666666666664,162.33203125,56.3333333333
33336,162.33203125,66.86666666666666C162.33203125,77.39999999999999,162.33203125,87.05,162.33203125,91.875L162.332
03125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-run LE-typer" id="L-run-typer-0"
d="M142.98046875,133.7540976305006L135.24283854166666,139.75341469208385C127.50520833333333,145.75273175366706,
112.02994791666667,157.75136587683355,104.29231770833333,168.57568293841678C96.5546875,179.4,96.5546875,189.04999
999999998,96.5546875,193.875L96.5546875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-typer LE-json" id="L-typer-json-0"
d="M96.5546875,237.5L96.5546875,243.20833333333334C96.5546875,248.91666666666666,96.5546875,260.3333333333333,96.
5546875,270.86666666666667C96.5546875,281.40000000000003,96.5546875,291.05,96.5546875,295.875L96.5546875,300.7"/><p
ath marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-json LE-sys" id="L-json-sys-0"
```

d="M96.5546875,339.5L96.5546875,345.20833333333333C96.5546875,350.91666666666667,96.5546875,362.33333333333333,96.5546875,372.86666666666666C96.5546875,383.40000000000003,96.5546875,393.05,96.5546875,397.875L96.5546875,402.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-sys LE-io" id="L-sys-io-0"

d="M96.5546875,441.5L96.5546875,447.20833333333333C96.5546875,452.91666666666667,96.5546875,464.33333333333333,96.5546875,474.86666666666666C96.5546875,485.40000000000003,96.5546875,495.05,96.5546875,499.875L96.5546875,504.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-io
LE-logging" id="L-io-logging-0"

d="M96.5546875,543.5L96.5546875,549.20833333333334C96.5546875,554.91666666666666,96.5546875,566.33333333333334,96.5546875,576.86666666666667C96.5546875,587.4,96.5546875,597.05000000000001,96.5546875,601.875L96.5546875,606.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-logging LE-os" id="L-logging-os-0"

d="M96.5546875,645.5L96.5546875,651.20833333333334C96.5546875,656.91666666666666,96.5546875,668.33333333333334,96.5546875,678.86666666666667C96.5546875,689.4,96.5546875,699.05000000000001,96.5546875,703.875L96.5546875,708.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-os
LE-PrettyTable" id="L-os-PrettyTable-0"

d="M96.5546875,747.5L96.5546875,753.20833333333334C96.5546875,758.91666666666666,96.5546875,770.33333333333334,96.5546875,780.86666666666667C96.5546875,791.4,96.5546875,801.05000000000001,96.5546875,805.875L96.5546875,810.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-PrettyTable LE-questionary" id="L-PrettyTable-questionary-0"

d="M96.5546875,849.5L96.5546875,855.20833333333334C96.5546875,860.91666666666666,96.5546875,872.33333333333334,96.5546875,882.86666666666667C96.5546875,893.4,96.5546875,903.05000000000001,96.5546875,907.875L96.5546875,912.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-questionary LE-openai" id="L-questionary-openai-0"

d="M96.5546875,951.5L96.5546875,957.20833333333334C96.5546875,962.91666666666666,96.5546875,974.33333333333334,96.5546875,984.86666666666667C96.5546875,995.4,96.5546875,1005.05000000000001,96.5546875,1009.875L96.5546875,1014.7"/><pat

h marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-openai LE-llama_index" id="L-openai-llama_index-0"

d="M96.5546875,1053.5L96.5546875,1059.2083333333333C96.5546875,1064.9166666666667,96.5546875,1076.3333333333333,96.5546875,1086.8666666666666C96.5546875,1097.3999999999999,96.5546875,1107.05,96.5546875,1111.875L96.5546875,1116.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-llama_index LE-VectorStoreIndex" id="L-llama_index-VectorStoreIndex-0"

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flowchart-link LS-VectorStoreIndex LE-SimpleDirectoryReader" id="L-VectorStoreIndex-SimpleDirectoryReader-0"

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flowchart-link LS-SimpleDirectoryReader LE-ServiceContext" id="L-SimpleDirectoryReader-ServiceContext-0"

d="M96.5546875,1359.5L96.5546875,1365.2083333333333C96.5546875,1370.9166666666667,96.5546875,1382.3333333333333,96.5546875,1392.8666666666668C96.5546875,1403.3999999999999,96.5546875,1413.05,96.5546875,1417.875L96.5546875,1422.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-ServiceContext LE-CLIInterface" id="L-ServiceContext-CLIInterface-0"

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flowchart-link LS-CLIInterface LE-configure" id="L-CLIInterface-configure-0"

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d="M96.5546875,2685.5L96.5546875,2691.2083333333335C96.5546875,2696.9166666666665,96.5546875,2708.3333333333335,9
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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 1801.75)"
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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2107.75)"
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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2209.75)"

class="edgeLabel"><g transform="translate(-36.95703125, -9.25)" class="label"><foreignObject height="18.5"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2311.75)"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2413.75)"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2515.75)"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2617.75)"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2719.75)"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 2821.75)"

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class="edgeLabel">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 3025.75)"

class="edgeLabel"><g transform="translate(-36.95703125, -9.25)" class="label"><foreignObject height="18.5"

width="73.9140625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Processing</div></foreignObject></g></g><g transform="translate(96.5546875, 3127.75)" class="edgeLabel"><g transform="translate(-36.95703125, -9.25)" class="label"><foreignObject height="18.5" width="73.9140625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Processing</div></foreignObject></g></g><g transform="translate(228.109375, 1648.75)" class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Output</div></foreignObject></g></g><g class="nodes"><g transform="translate(162.33203125, 16.75)" id="flowchart-User-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g transform="translate(162.33203125, 118.75)" id="flowchart-run-1" class="node default default flowchart-label"><rect height="33.5" width="38.703125" y="-16.75" x="-19.3515625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-11.8515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="23.703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">run</div></foreignObject></g></g><g transform="translate(96.5546875, 220.75)" id="flowchart-typer-3" class="node default default flowchart-label"><rect height="33.5" width="53.09375" y="-16.75" x="-26.546875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-19.046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="38.09375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">typer</div></foreignObject></g></g><g transform="translate(96.5546875, 322.75)" id="flowchart-json-5" class="node default default flowchart-label"><rect height="33.5" width="44.671875" y="-16.75" x="-22.3359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-14.8359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="29.671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">json</div></foreignObject></g></g><g transform="translate(96.5546875, 424.75)" id="flowchart-sys-7" class="node default default flowchart-label"><rect height="33.5"

width="35.84375" y="-16.75" x="-17.921875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-10.421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="20.84375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">sys</div></foreignObject></g></g><g transform="translate(96.5546875, 526.75)" id="flowchart-io-9"

class="node default default flowchart-label"><rect height="33.5" width="28.1484375" y="-16.75" x="-14.07421875" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-6.57421875, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="13.1484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">io</div></foreignObject></g></g><g

transform="translate(96.5546875, 628.75)" id="flowchart-logging-11" class="node default default flowchart-label"><rect height="33.5"

width="65.703125" y="-16.75" x="-32.8515625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-25.3515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="50.703125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">logging</div></foreignObject></g></g><g transform="translate(96.5546875, 730.75)"

id="flowchart-os-13" class="node default default flowchart-label"><rect height="33.5" width="30.0625" y="-16.75" x="-15.03125"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-7.53125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="15.0625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">os</div></foreignObject></g></g><g

transform="translate(96.5546875, 832.75)" id="flowchart-PrettyTable-15" class="node default default flowchart-label"><rect

height="33.5" width="96.7578125" y="-16.75" x="-48.37890625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-40.87890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="81.7578125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">PrettyTable</div></foreignObject></g></g><g transform="translate(96.5546875, 934.75)"

id="flowchart-questionary-17" class="node default default flowchart-label"><rect height="33.5" width="98.609375" y="-16.75"

x="-49.3046875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-41.8046875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="83.609375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">questionary</div></foreignObject></g></g><g

transform="translate(96.5546875, 1036.75)" id="flowchart-openai-19" class="node default default flowchart-label"><rect height="33.5" width="62.9375" y="-16.75" x="-31.46875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-23.96875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="47.9375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">openai</div></foreignObject></g></g><g transform="translate(96.5546875, 1138.75)" id="flowchart-llama_index-21" class="node default default flowchart-label"><rect height="33.5" width="101.8828125" y="-16.75" x="-50.94140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-43.44140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="86.8828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">llama_index</div></foreignObject></g></g><g transform="translate(96.5546875, 1240.75)" id="flowchart-VectorStoreIndex-23" class="node default default flowchart-label"><rect height="33.5" width="137.5859375" y="-16.75" x="-68.79296875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-61.29296875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="122.5859375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">VectorStoreIndex</div></foreignObject></g></g><g transform="translate(96.5546875, 1342.75)" id="flowchart-SimpleDirectoryReader-25" class="node default default flowchart-label"><rect height="33.5" width="178.8359375" y="-16.75" x="-89.41796875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-81.91796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="163.8359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">SimpleDirectoryReader</div></foreignObject></g></g><g transform="translate(96.5546875, 1444.75)" id="flowchart-ServiceContext-27" class="node default default flowchart-label"><rect height="33.5" width="123.015625" y="-16.75" x="-61.5078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-54.0078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="108.015625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">ServiceContext</div></foreignObject></g></g><g transform="translate(96.5546875, 1546.75)" id="flowchart-CLIInterface-29" class="node default default flowchart-label"><rect height="33.5" width="102.578125" y="-16.75" x="-51.2890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-43.7890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="87.578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">CLIInterface</div></foreignObject></g></g><g transform="translate(96.5546875, 1648.75)"

id="flowchart-configure-31" class="node default default flowchart-label"><rect height="33.5" width="82.4453125" y="-16.75"

x="-41.22265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-33.72265625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="67.4453125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">configure</div></foreignObject></g></g><g

transform="translate(96.5546875, 1750.75)" id="flowchart-agent-33" class="node default default flowchart-label"><rect height="33.5"

width="55.25" y="-16.75" x="-27.625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-20.125, -9.25)"

style="" class="label"><rect/><foreignObject height="18.5" width="40.25"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">agent</div></foreignObject></g></g><g

transform="translate(96.5546875, 1852.75)" id="flowchart-system-35" class="node default default flowchart-label"><rect height="33.5"

width="64.1953125" y="-16.75" x="-32.09765625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-24.59765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="49.1953125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">system</div></foreignObject></g></g><g transform="translate(96.5546875, 1954.75)"

id="flowchart-presets-37" class="node default default flowchart-label"><rect height="33.5" width="66.8828125" y="-16.75"

x="-33.44140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-25.94140625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="51.8828125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">presets</div></foreignObject></g></g><g

transform="translate(96.5546875, 2056.75)" id="flowchart-constants-39" class="node default default flowchart-label"><rect

height="33.5" width="83.0390625" y="-16.75" x="-41.51953125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-34.01953125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="68.0390625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">constants</div></foreignObject></g></g><g transform="translate(96.5546875, 2158.75)"

id="flowchart-personas-41" class="node default default flowchart-label"><rect height="33.5" width="77.546875" y="-16.75"

x="-38.7734375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-31.2734375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="62.546875"><div style="display: inline-block; white-space: nowrap;"

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xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">personas</span></div></foreignObject></g></g><g
transform="translate(96.5546875, 2260.75)" id="flowchart-humans-43" class="node default default flowchart-label"><rect
height="33.5" width="69.390625" y="-16.75" x="-34.6953125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-27.1953125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="54.390625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">humans</span></div></foreignObject></g></g><g transform="translate(96.5546875, 2362.75)"
id="flowchart-utils-45" class="node default default flowchart-label"><rect height="33.5" width="45.84375" y="-16.75" x="-22.921875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.421875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="30.84375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">utils</span></div></foreignObject></g></g><g
transform="translate(96.5546875, 2464.75)" id="flowchart-LocalStateManager-47" class="node default default flowchart-label"><rect
height="33.5" width="150.1328125" y="-16.75" x="-75.06640625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-67.56640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="135.1328125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LocalStateManager</span></div></foreignObject></g></g><g transform="translate(96.5546875, 2566.75)"
id="flowchart-MemGPTConfig-49" class="node default default flowchart-label"><rect height="33.5" width="122.796875" y="-16.75"
x="-61.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.8984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="107.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">MemGPTConfig</span></div></foreignObject></g></g><g
transform="translate(96.5546875, 2668.75)" id="flowchart-AgentConfig-51" class="node default default flowchart-label"><rect
height="33.5" width="101.6875" y="-16.75" x="-50.84375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-43.34375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="86.6875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">AgentConfig</span></div></foreignObject></g></g><g transform="translate(96.5546875, 2770.75)"
id="flowchart-MEMGPT_DIR-53" class="node default default flowchart-label"><rect height="33.5" width="107.2734375" y="-16.75"
x="-53.63671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.13671875, -9.25)" style=""
```

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class="label"><rect/><foreignObject height="18.5" width="92.2734375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">MEMGPT_DIR</span></div></foreignObject></g></g><g
transform="translate(96.5546875, 2872.75)" id="flowchart-Agent-55" class="node default default flowchart-label"><rect height="33.5"
width="56.28125" y="-16.75" x="-28.140625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-20.640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="41.28125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Agent</span></div></foreignObject></g></g><g transform="translate(96.5546875, 2974.75)"
id="flowchart-embedding_model-57" class="node default default flowchart-label"><rect height="33.5" width="146.4296875" y="-16.75"
x="-73.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.71484375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">embedding_model</span></div></foreignObject></g></g><g
transform="translate(96.5546875, 3076.75)" id="flowchart-configure_azure_support-59" class="node default default
flowchart-label"><rect height="33.5" width="193.109375" y="-16.75" x="-96.5546875" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-89.0546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="178.109375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">configure_azure_support</span></div></foreignObject></g></g><g transform="translate(162.33203125,
3178.75)" id="flowchart-check_azure_embeddings-61" class="node default default flowchart-label"><rect height="33.5"
width="198.140625" y="-16.75" x="-99.0703125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-91.5703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="183.140625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">check_azure_embeddings</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-16.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-16.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1791.671875 216.5" style="max-width:
1791.67px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"

```

```
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
```

```
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M75.88866017964072,83.5L90.74836264970061,72.375C105.6080651197605,61.25,135.32747005988026,39,228.44576627994
013,27.875C321.56406250000003,16.75,478.08125,16.75,556.33984375,16.75L634.5984375,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-C" id="L-A-C-0"
d="M107.03125,100.25L116.70052083333333,100.25C126.36979166666667,100.25,145.70833333333334,100.25,164.1635416666
6667,100.25C182.61875,100.25,200.19062499999998,100.25,208.9765625,100.25L217.7625,100.25"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-D" id="L-B-D-0"
d="M1164.1484375,16.75L1237.7877604166667,16.75C1311.4270833333333,16.75,1458.7057291666667,16.75,1535.8731770833
335,16.75C1613.0406249999999,16.75,1620.096875,16.75,1623.625,16.75L1627.153125,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-E" id="L-C-E-0"
d="M1580.984375,100.25L1585.1510416666667,100.25C1589.3177083333333,100.25,1597.6510416666667,100.25,1605.1010416
666668,100.25C1612.5510416666666,100.25,1619.1177083333332,100.25,1622.4010416666667,100.25L1625.684375,100.25"/><
path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-A LE-F" id="L-A-F-0"
```


d="M75.88866017964072,117L90.74836264970061,128.125C105.6080651197605,139.25,135.32747005988026,161.5,211.2751933
6327347,172.625C287.22291666666666,183.75,409.3989583333334,183.75,470.4869791666667,183.75L531.575,183.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-G" id="L-F-G-0"

d="M1267.171875,183.75L1323.640625,183.75C1380.109375,183.75,1493.046875,183.75,1553.127734375,183.75C1613.2085937
499999,183.75,1620.4328125,183.75,1624.044921875,183.75L1627.65703125,183.75"/></g><g class="edgeLabels"><g
transform="translate(165.046875, 16.75)" class="edgeLabel"><g transform="translate(-27.19140625, -9.25)"
class="label"><foreignObject height="18.5" width="54.3828125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">imports</div></foreignObject></g></g><g
transform="translate(165.046875, 100.25)" class="edgeLabel"><g transform="translate(-33.015625, -9.25)"
class="label"><foreignObject height="18.5" width="66.03125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">functions</div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
transform="translate(165.046875, 183.75)" class="edgeLabel"><g transform="translate(-32.1328125, -9.25)"
class="label"><foreignObject height="18.5" width="64.265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">variables</div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(53.515625, 100.25)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="107.03125" y="-16.75" x="-53.515625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.015625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="92.03125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">cli_config.py</div></foreignObject></g></g></g>

transform="translate(902.0234375, 16.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="524.25" y="-16.75" x="-262.125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-254.625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="509.25"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">builtins, questionnaire, openai, PrettyTable, typer, os, shutil, defaultdict</div></foreignObject></g></g><g transform="translate(902.0234375, 100.25)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="1357.921875" y="-16.75" x="-678.9609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-671.4609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="1342.921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">get_azure_credentials, get_openai_credentials, configure_llm_endpoint, configure_model, configure_embedding_endpoint, configure_cli, configure_archival_storage, configure, list, add</div></foreignObject></g></g><g transform="translate(1703.328125, 16.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="141.75" y="-16.75" x="-70.875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-63.375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="126.75"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">External Libraries</div></foreignObject></g></g><g transform="translate(1703.328125, 100.25)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="144.6875" y="-16.75" x="-72.34375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-64.84375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="129.6875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Internal Functions</div></foreignObject></g></g><g transform="translate(902.0234375, 183.75)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="730.296875" y="-16.75" x="-365.1484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-357.6484375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="715.296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">app, DEFAULT_ENDPOINTS, DEFAULT_OLLAMA_MODEL, DEFAULT_WRAPPER_NAME, LLM_MAX_TOKENS</div></foreignObject></g></g><g transform="translate(1703.328125, 183.75)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="140.7421875" y="-16.75" x="-70.37109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.37109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="131.7421875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g>

```
style="" class="basic label-container"/><g transform="translate(-62.87109375, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="125.7421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Internal
Variables</span></div></foreignObject></g></g></g></g></svg>
```

High_Level_Doc-17.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-17.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 837.2578125 300" style="max-width:
837.258px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
```

```

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M324.24609375,22.78661052631579L277.953125,28.73884210526316C231.66015625,34.69107368421053,139.07421875,46.5
9553684210527,92.78125,55.83110175438596C46.48828125,65.06666666666666,46.48828125,71.63333333333334,46.48828125,
74.91666666666667L46.48828125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"

d="M324.24609375,28.38147006328087L303.984375,33.401225052734056C283.72265625,38.420980042187246,243.19921875,4
8.46049002109362,222.9375,56.76357834388014C202.67578125,65.06666666666666,202.67578125,71.63333333333334,202.675
78125,74.91666666666667L202.67578125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

```

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"

d="M371.1953125,33.5L371.1953125,37.666666666666664C371.1953125,41.833333333333336,371.1953125,50.166666666666666
4,371.1953125,57.616666666666667C371.1953125,65.066666666666666,371.1953125,71.633333333333334,371.1953125,74.916666
66666667L371.1953125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0"

d="M418.14453125,28.408765102230483L438.34049479166667,33.423970918525406C458.53645833333333,38.43917673482032,49
8.9283854166667,48.46958836741016,519.1243489583334,56.76812751703841C539.3203125,65.06666666666666,539.3203125,
71.63333333333334,539.3203125,74.91666666666667L539.3203125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0"

d="M418.14453125,22.138731086029704L470.9440104166667,28.19894257169142C523.7434895833334,34.259154057353136,62
9.3424479166666,46.37957702867657,682.1419270833334,55.723121847671614C734.94140625,65.06666666666666,734.941406
25,71.63333333333334,734.94140625,74.91666666666667L734.94140625,78.2"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-G" id="L-B-G-0"

d="M46.48828125,117L46.48828125,121.16666666666667C46.48828125,125.33333333333333,46.48828125,133.66666666666666
,92.09328010670076,143.6971075021203C137.6982789634015,153.72754833757395,228.90827667680298,165.45509667514793,
274.51327553350376,171.3188708439349L320.1182743902045,177.18264501272188"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-G" id="L-C-G-0"

d="M202.67578125,117L202.67578125,121.16666666666667C202.67578125,125.33333333333333,202.67578125,133.6666666666
6666,222.26823898533496,142.6872817414662C241.86069672066992,151.70789681626573,281.04561219133984,161.41579363
253146,300.6380699266748,166.26974204066434L320.23052766200976,171.1236904487972"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-G" id="L-D-G-0"

d="M371.1953125,117L371.1953125,121.16666666666667C371.1953125,125.33333333333333,371.1953125,133.66666666666666
,371.1953125,141.11666666666667C371.1953125,148.56666666666666,371.1953125,155.13333333333333,371.1953125,158.416

66666666666L371.1953125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-G" id="L-E-G-0"

d="M539.3203125,117L539.3203125,121.16666666666667C539.3203125,125.33333333333333,539.3203125,133.66666666666666

,519.7934935062689,142.6823723994346C500.2666745125377,151.69807813220254,461.21303652507527,161.3961562644051,4

41.6862175313441,166.24519533050636L422.1593985376129,171.09423439660765"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F

LE-G" id="L-F-G-0"

d="M734.94140625,117L734.94140625,121.16666666666667C734.94140625,125.33333333333333,734.94140625,133.66666666666666

6666,682.8313477423084,143.81441458775197C630.7212892346166,153.96216250883728,526.5011722192334,165.9243250176

7453,474.39111371154166,171.90540627209316L422.28105520385,177.8864875265118"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G

LE-H" id="L-G-H-0"

d="M371.1953125,200.5L371.1953125,204.66666666666666C371.1953125,208.83333333333334,371.1953125,217.16666666666666

66,371.1953125,224.61666666666667C371.1953125,232.06666666666667,371.1953125,238.63333333333333,371.1953125,241.91

66666666666L371.1953125,245.2"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)"

class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g
transform="translate(371.1953125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="93.8984375" y="-16.75" x="-46.94921875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-39.44921875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="78.8984375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">cli_load.py</div></foreignObject></g></g><g transform="translate(46.48828125, 100.25)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="92.9765625" y="-16.75" x="-46.48828125"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.98828125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="77.9765625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">load_index</div></foreignObject></g></g><g
transform="translate(202.67578125, 100.25)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5"
width="119.3984375" y="-16.75" x="-59.69921875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-52.19921875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="104.3984375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">load_directory</div></foreignObject></g></g><g transform="translate(371.1953125, 100.25)"
id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5" width="117.640625" y="-16.75" x="-58.8203125"

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ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-51.3203125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="102.640625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">load_webpage</span></div></foreignObject></g></g><g
transform="translate(539.3203125, 100.25)" id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5"
width="118.609375" y="-16.75" x="-59.3046875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-51.8046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="103.609375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">load_database</span></div></foreignObject></g></g><g transform="translate(734.94140625, 100.25)"
id="flowchart-F-5" class="node default default flowchart-label"><rect height="33.5" width="172.6328125" y="-16.75"
x="-86.31640625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-78.81640625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="157.6328125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">load_vector_database</span></div></foreignObject></g></g><g
transform="translate(371.1953125, 183.75)" id="flowchart-G-6" class="node default default flowchart-label"><rect height="33.5"
width="91.640625" y="-16.75" x="-45.8203125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-38.3203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="76.640625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">store_docs</span></div></foreignObject></g></g><g transform="translate(371.1953125, 267.25)"
id="flowchart-H-7" class="node default default flowchart-label"><rect height="33.5" width="142.4453125" y="-16.75"
x="-71.22265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-63.72265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="127.4453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">StorageConnector</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-18.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-18.svg):

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 121.71875 318.5" style="max-width:

121.719px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"

id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg

.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg

.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg

.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg

.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg

p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node

path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

```
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M52.859375,33.5L52.859375,37.666666666666664C52.859375,41.833333333333336,52.859375,50.166666666666664,52.8593
75,57.616666666666667C52.859375,65.066666666666666,52.859375,71.633333333333334,52.859375,74.91666666666667L52.85937
5,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-C" id="L-B-C-0"
d="M52.859375,117L52.859375,122.70833333333333C52.859375,128.41666666666666,52.859375,139.83333333333334,52.85937
5,150.36666666666667C52.859375,160.9,52.859375,170.54999999999998,52.859375,175.375L52.859375,180.2"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"
d="M52.859375,219L52.859375,223.16666666666666C52.859375,227.33333333333334,52.859375,235.66666666666666,52.85937
5,243.11666666666667C52.859375,250.56666666666667,52.859375,257.13333333333333,52.859375,260.41666666666667L52.85937
5,263.7"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0"
width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></span></div></foreignObject></g></g><g transform="translate(52.859375, 151.25)" class="edgeLabel"><g
transform="translate(-38.72265625, -9.25)" class="label"><foreignObject height="18.5" width="77.4453125"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">30
```

```

seconds</span></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject
height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(52.859375, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="105.71875" y="-16.75" x="-52.859375"
ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-45.359375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="90.71875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">constants.py</span></div></foreignObject></g></g><g
transform="translate(52.859375, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="79.109375" y="-16.75" x="-39.5546875" ry="5" rx="5" style="" class="basic label-container"/><g
transform="translate(-32.0546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="64.109375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">TIMEOUT</span></div></foreignObject></g></g><g transform="translate(52.859375, 202.25)" id="flowchart-C-5"
class="node default default flowchart-label"><rect height="33.5" width="67.578125" y="-16.75" x="-33.7890625" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-26.2890625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="52.578125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process</span></div></foreignObject></g></g><g
transform="translate(52.859375, 285.75)" id="flowchart-D-7" class="node default default flowchart-label"><rect height="33.5"
width="64.8671875" y="-16.75" x="-32.43359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-24.93359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="49.8671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Output</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-19.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-19.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 675.09375 537" style="max-width:
675.094px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"

```

```
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
```

```

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"><g
id="DEFAULT_WRAPPER" class="cluster default flowchart-label"><rect height="483.375" width="210.640625" y="5.875"
x="448.453125" ry="0" rx="0" style=""/><g transform="translate(485.1953125, 5.875)" class="cluster-label"><foreignObject
height="18.5" width="137.15625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">DEFAULT_WRAPPER</span></div></foreignObject></g></g><g
id="constants.py" class="cluster default flowchart-label"><rect height="521" width="327.0546875" y="0" x="0" ry="0" rx="0"
style=""/><g transform="translate(118.16796875, 0)" class="cluster-label"><foreignObject height="18.5" width="90.71875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">constants.py</span></div></foreignObject></g></g></g><g class="edgePaths"><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-koboldcpp LE-airoboros" id="L-koboldcpp-airoboros-0"
d="M291.61328125,51.75L297.5201822916667,51.75C303.4270833333333,51.75,315.2408854166667,51.75,331.2643229166667,5
1.75C347.2877604166667,51.75,367.5208333333333,51.75,387.75390625,51.75C407.9869791666667,51.75,428.2200520833333,
51.75,454.0836055658611,82.96135634496513C479.94715904838887,114.17271268993026,511.4411930967777,176.5954253798
6053,527.1882101209721,207.80678172482564L542.9352271451666,239.01813806979075"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-llamacpp LE-airoboros" id="L-llamacpp-airoboros-0"
d="M287.484375,135.25L294.0794270833333,135.25C300.6744791666667,135.25,313.8645833333333,135.25,330.576171875,135
.25C347.2877604166667,135.25,367.5208333333333,135.25,387.75390625,135.25C407.9869791666667,135.25,428.22005208333

```

33,135.25,452.9740131818298,152.65725404874226C477.7279742803262,170.06450809748455,507.0028235606523,204.879016

19496907,521.6402482008153,222.28627024371133L536.2776728409784,239.6935242924536"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-lmstudio LE-airoboros" id="L-lmstudio-airoboros-0"

d="M285.65625,218.75L292.5559895833333,218.75C299.4557291666667,218.75,313.2552083333333,218.75,330.271484375,218.

75C347.2877604166667,218.75,367.5208333333333,218.75,387.75390625,218.75C407.9869791666667,218.75,428.22005208333

33,218.75,448.0264306852139,222.59114801684714C467.8328092870945,226.4322960336943,487.212493574189,234.11459206

73886,496.9023357177362,237.95574008423577L506.59217786128346,241.7968881010829"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-ollama LE-airoboros" id="L-ollama-airoboros-0"

d="M283.09765625,302.25L290.423828125,302.25C297.75,302.25,312.40234375,302.25,329.8450520833333,302.25C347.287760

4166667,302.25,367.5208333333333,302.25,387.75390625,302.25C407.9869791666667,302.25,428.2200520833333,302.25,448.0

264306852139,298.40885198315283C467.8328092870945,294.5677039663057,487.212493574189,286.8854079326114,496.9023

357177362,283.04425991576426L506.59217786128346,279.2031118989171"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-webui-legacy LE-airoboros" id="L-webui-legacy-airoboros-0"

d="M302.0546875,385.75L306.2213541666667,385.75C310.3880208333333,385.75,318.7213541666667,385.75,333.00455729166

67,385.75C347.2877604166667,385.75,367.5208333333333,385.75,387.75390625,385.75C407.9869791666667,385.75,428.22005

20833333,385.75,452.9740131818298,368.3427459512577C477.7279742803262,350.9354919025155,507.0028235606523,316.12

098380503096,521.6402482008153,298.7137297562887L536.2776728409784,281.30647570754644"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-webui LE-airoboros" id="L-webui-airoboros-0"

d="M276.26953125,469.25L284.7337239583333,469.25C293.1979166666667,469.25,310.1263020833333,469.25,328.70703125,46

9.25C347.2877604166667,469.25,367.5208333333333,469.25,387.75390625,469.25C407.9869791666667,469.25,428.2200520833

333,469.25,454.0836055658611,438.03864365503483C479.94715904838887,406.8272873100697,511.4411930967777,344.40457

46201395,527.1882101209721,313.19321827517433L542.9352271451666,281.9818619302092"/></g><g class="edgeLabels"><g

```
transform="translate(387.75390625, 51.75)" class="edgeLabel"><g transform="translate(-35.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="71.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow</span></div></foreignObject></g></g><g
transform="translate(387.75390625, 135.25)" class="edgeLabel"><g transform="translate(-35.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="71.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow</span></div></foreignObject></g></g><g
transform="translate(387.75390625, 218.75)" class="edgeLabel"><g transform="translate(-35.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="71.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow</span></div></foreignObject></g></g><g
transform="translate(387.75390625, 302.25)" class="edgeLabel"><g transform="translate(-35.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="71.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow</span></div></foreignObject></g></g><g
transform="translate(387.75390625, 385.75)" class="edgeLabel"><g transform="translate(-35.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="71.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow</span></div></foreignObject></g></g><g
transform="translate(387.75390625, 469.25)" class="edgeLabel"><g transform="translate(-35.69921875, -9.25)"
class="label"><foreignObject height="18.5" width="71.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(553.7734375, 260.5)" id="flowchart-airoboros-6" class="node default default
flowchart-label"><rect height="33.5" width="160.640625" y="-16.75" x="-80.3203125" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-72.8203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="145.640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">airoboros-l2-70b-2.1</span></div></foreignObject></g></g><g transform="translate(163.52734375, 51.75)"
id="flowchart-koboldcpp-0" class="node default default flowchart-label"><rect height="33.5" width="256.171875" y="-16.75"
x="-128.0859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-120.5859375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="241.171875"><div style="display: inline-block; white-space: nowrap;"
```

xmlns="http://www.w3.org/1999/xhtml">koboldcpp:

http://localhost:5001</div></foreignObject></g></g><g transform="translate(163.52734375, 135.25)"

id="flowchart-llamacpp-1" class="node default default flowchart-label"><rect height="33.5" width="247.9140625" y="-16.75"

x="-123.95703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-116.45703125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="232.9140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">llamacpp:

http://localhost:8080</div></foreignObject></g></g><g transform="translate(163.52734375, 218.75)"

id="flowchart-lmstudio-2" class="node default default flowchart-label"><rect height="33.5" width="244.2578125" y="-16.75"

x="-122.12890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-114.62890625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="229.2578125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">lmstudio:

http://localhost:1234</div></foreignObject></g></g><g transform="translate(163.52734375, 302.25)" id="flowchart-ollama-3"

class="node default default flowchart-label"><rect height="33.5" width="239.140625" y="-16.75" x="-119.5703125" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-112.0703125, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="224.140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">ollama:

http://localhost:11434</div></foreignObject></g></g><g transform="translate(163.52734375, 385.75)"

id="flowchart-webui-legacy-4" class="node default default flowchart-label"><rect height="33.5" width="277.0546875" y="-16.75"

x="-138.52734375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-131.02734375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="262.0546875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">webui-legacy:

http://localhost:5000</div></foreignObject></g></g><g transform="translate(163.52734375, 469.25)" id="flowchart-webui-5"

class="node default default flowchart-label"><rect height="33.5" width="225.484375" y="-16.75" x="-112.7421875" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-105.2421875, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="210.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">webui:

http://localhost:5000</div></foreignObject></g></g></g></g></g></svg>

High_Level_Doc-2.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-2.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 372.2890625 216.5" style="max-width:
372.289px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
```

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0" d="M178.14453125,33.5L178.14453125,37.666666666666664C178.14453125,41.833333333333336,178.14453125,50.166666666666664,178.14453125,57.616666666666667C178.14453125,65.06666666666666,178.14453125,71.63333333333334,178.14453125,74.91666666666667L178.14453125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0" d="M157.52734375,106.60582636284973L138.39192708333334,112.50485530237478C119.25651041666667,118.4038842418998,80.98567708333333,130.2019421209499,61.850260416666664,139.3843043938083C42.71484375,148.56666666666666,42.71484375,155.13333333333333,42.71484375,158.41666666666666L42.71484375,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0" d="M178.14453125,117L178.14453125,121.16666666666667C178.14453125,125.33333333333333,178.14453125,133.66666666666666

6666,178.14453125,141.11666666666667C178.14453125,148.56666666666666,178.14453125,155.13333333333333,178.14453125,158.41666666666666L178.14453125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0" d="M198.76171875,106.60582636284973L217.89713541666666,112.50485530237478C237.03255208333334,118.4038842418998,275.3033854166667,130.2019421209499,294.4388020833333,139.3843043938083C313.57421875,148.56666666666666,313.57421875,155.13333333333333,313.57421875,158.41666666666666L313.57421875,161.7"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g transform="translate(178.14453125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="72.671875" y="-16.75" x="-36.3359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.8359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="57.671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">main.py</div></foreignObject></g></g><g transform="translate(178.14453125, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="41.234375" y="-16.75" x="-20.6171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-13.1171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="26.234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">app</div></foreignObject></g></g><g transform="translate(42.71484375, 183.75)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5" width="85.4296875" y="-16.75" x="-42.71484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-35.21484375, -9.25)" style="" class="label"><rect/><foreignObject

```
height="18.5" width="70.4296875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Function1</span></div></foreignObject></g></g><g

transform="translate(178.14453125, 183.75)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5"

width="85.4296875" y="-16.75" x="-42.71484375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-35.21484375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="70.4296875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Function2</span></div></foreignObject></g></g><g transform="translate(313.57421875, 183.75)"

id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5" width="85.4296875" y="-16.75" x="-42.71484375"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-35.21484375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="70.4296875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Function3</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-20.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-20.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 8014.8359375 637.53125"
style="max-width: 8014.84px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
```

```
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
```

```
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M3695.4686084974965,42.54802350356583L3690.9634237479136,48.96449875297153C3686.458238998331,55.38097400237
722,3677.4478694991653,68.21392450118861,3676.924015464018,79.64683034388405C3676.4001614288704,91.079736186579
5,3684.362822857742,101.11259737315898,3688.344153572177,106.12902796644873L3692.3254842866127,111.145458559738
46"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-C" id="L-B-C-0"

d="M3656.0546875,132.65340580154552L3058.443359375,139.5106506679546C2460.83203125,146.36789553436367,1265.6093
75,160.08238526718185,668.0787272564402,193.80304557579385C70.5480795128805,227.52370588440587,70.709440275761,2
81.25053676881174,70.79012065720124,308.1139522110147L70.87080103864149,334.9773676532176"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-D" id="L-B-D-0"

d="M3656.0546875,132.6958213370481L3098.0794270833335,139.5459969475401C2540.1041666666665,146.39617255803208,1
424.1536458333333,160.09652377901602,866.2580208929902,185.96962379629147C308.3623959526471,211.84272381356695,
308.5216669052941,249.88857262713393,308.60130238161764,268.9114970339174L308.68093785794116,287.9344214407009"/
><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-E" id="L-B-E-0"

d="M3656.0546875,132.75583232158766L3146.0559895833335,139.59600610132304C2636.0572916666665,146.4361798810584
5,1616.0598958333333,160.1165274405292,1106.1407381198262,185.47962603102724C596.2215804063189,210.842724621525
24,596.3806608126379,247.88857424305047,596.4602010157973,266.4114990538131L596.5397412189568,284.9344238645757"
/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-F" id="L-B-F-0"

d="M3656.0546875,132.82598647579417L3192.771484375,139.65446789649513C2729.48828125,146.4829493171961,1802.9218
75,160.13991215859804,1339.718527651957,187.25238479964537C876.515180303914,214.3648574406927,876.6748918578281,
254.93283988138538,876.7547476347851,275.2168311017317L876.8346034117423,295.5008223220781"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
```

LE-G" id="L-B-G-0"

d="M3656.0546875,132.94242026620137L3254.150390625,139.7514960551678C2852.24609375,146.56057184413424,2048.4375,160.17872342206712,1646.601018377634,170.8474407379016C1244.764536755268,181.51615805373612,1244.9001672605361,189.2354411074722,1244.9679825131702,193.09508263434023L1245.0357977658043,196.9547241612083"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-H" id="L-B-H-0"

d="M3656.0546875,133.08902888418197L3311.9290364583335,139.87366990348497C2967.8033854166665,146.658310922788,2279.5520833333335,160.22759296139398,1935.5067935663644,190.89648377226413C1591.4615037993954,221.5653745831343,1591.6222263487905,269.33387416626863,1591.7025876234882,293.21812395783576L1591.7829488981856,317.10237374940

294"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-I" id="L-B-I-0"

d="M3656.0546875,133.295120707064L3370.2005208333335,140.04541308922C3084.3463541666665,146.795705471376,2512.6380208333335,160.29629023568802,2226.8498705671414,170.41341904204725C1941.061720300949,180.53054784840643,1941.1937531018982,187.2642206968129,1941.2597695023726,190.63105712101614L1941.3257859028474,193.99789354521937"/><

path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-B LE-J" id="L-B-J-0"

d="M3656.0546875,133.60330141864975L3428.5455729166665,140.3022303488748C3201.0364583333335,147.00115927909982,2746.0182291666665,160.3990171395499,2518.5894670038574,190.90862818284404C2291.160704841048,221.41823922613813,2291.3214096820957,269.0396034522763,2291.4017621026196,292.85028556534536L2291.4821145231435,316.660967678414

47"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-K" id="L-B-K-0"

d="M3656.0546875,134.00889939329323L3477.3984375,140.64022866107769C3298.7421875,147.27155792886217,2941.4296875,160.53421646443107,2762.851414352954,180.02441613971942C2584.273141205909,199.51461581500783,2584.429094911817,225.2323566300157,2584.507071764772,238.0912270375196L2584.585048617726,250.95009744502352"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-L" id="L-B-L-0"

d="M3656.0546875,134.90856721262068L3536.3346354166665,141.38995184385058C3416.6145833333335,147.8713364750804
5,3177.1744791666665,160.83410573754023,3057.532722326139,181.04284848625835C2937.8909654856106,201.25159123497
653,2938.0475559712213,228.70630746995303,2938.125851214027,242.43366558744128L2938.2041464568324,256.161023704
92956"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-M" id="L-B-M-0"

d="M3656.0546875,137.58158443218778L3598.4088541666665,143.61746619348983C3540.7630208333335,149.6533479547918
5,3425.4713541666665,161.72511147739593,3367.9019126652233,177.481853846665C3310.3324711637797,193.238596215934
05,3310.485254827559,212.68031743186813,3310.561646659449,222.40117803983514L3310.638038491338,232.122038647802
19"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-N" id="L-B-N-0"

d="M3708.9140625,148.796875L3708.9140625,152.96354166666666C3708.9140625,157.13020833333334,3708.9140625,165.463
54166666666,3708.990199873884,178.97607097762412C3709.0663372477684,192.48860028858158,3709.218611995537,211.18
03255771632,3709.294749369421,220.52618822145396L3709.3708867433056,229.8720508657448"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-O" id="L-B-O-0"

d="M3761.7734375,137.7633101266303L3817.306640625,143.76890427219192C3872.83984375,149.77449841775353,3983.9062
5,161.78568670887677,4039.5169980879296,179.6247633615343C4095.1277461758596,197.46384001419176,4095.2828361017
196,221.13080502838352,4095.360381064649,232.96428753547943L4095.437926027579,244.7977700425753"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-P" id="L-B-P-0"

d="M3761.7734375,134.98683836500734L3878.0716145833335,141.4551778041728C3994.3697916666665,147.92351724333824,
4226.966145833333,160.8601961216691,4343.342325025585,180.25250998221273C4459.718504217836,199.64482384275638,4
459.874508435672,225.4927726855128,4459.952510544591,238.41674710689097L4460.030512653509,251.34072152826917"/><
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LS-B LE-Q" id="L-B-Q-0"

d="M3761.7734375,134.1128027570155L3931.0013020833335,140.7268147975129C4100.229166666667,147.34082683801032,44

38.684895833333,160.56885091900517,4607.992512093347,186.85162022081417C4777.30012835336,213.13438952262314,477

7.459631706722,252.4719040452463,4777.539383383402,272.1406613065579L4777.619135060083,291.80941856786944"/><pat

h marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-B LE-R" id="L-B-R-0"

d="M3761.7734375,133.6291373151916L3985.423828125,140.32376026265968C4209.07421875,147.01838321012772,4656.375,1

60.40762910506388,4880.102746476024,178.53339206912528C5103.830492952048,196.6591550331867,5103.985204654097,21

9.52143506637336,5104.062560505121,230.95257508296672L5104.1399163561455,242.38371509956008"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-S" id="L-B-S-0"

d="M3761.7734375,133.2664530616221L4054.5540364583335,140.02152338468508C4347.334635416667,146.77659370774805,4

932.895833333333,160.28673435387404,5225.747171754591,172.0029621665718C5518.598510175849,183.71918997926957,55

18.739989101698,193.64150495853914,5518.810728564623,198.6026624481739L5518.881468027547,203.5638199378087"/><pa

th marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-B LE-T" id="L-B-T-0"

d="M3761.7734375,133.0587351781355L4116.465494791667,139.84842514844624C4471.157552083333,146.63811511875699,51

80.541666666667,160.2174950593785,5535.3132888139235,185.65706285993465C5890.084910961181,211.09663066049083,58

90.244040672361,248.39638632098163,5890.323605527951,267.04626415122704L5890.403170383541,285.69614198147246"/><

path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-B LE-U" id="L-B-U-0"

d="M3761.7734375,132.92856440229818L4170.132161458333,139.73994950191516C4578.490885416667,146.55133460153212,5

395.208333333333,160.17410480076606,5803.645166065646,180.19136472609577C6212.081998797959,200.20862465142545,6

212.238216345919,226.62037430285093,6212.316325119898,239.82624912856366L6212.394433893877,253.03212395427641"/>

<path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-B LE-V" id="L-B-V-0"

d="M3761.7734375,132.812859418937L4233.147135416667,139.6435286824475C4704.520833333333,146.474197945958,5647.2

68229166667,160.135536472979,6118.718033180526,176.2677978028007C6590.167837194385,192.40005913262235,6590.3200

49388772,211.0032432652447,6590.396155485964,220.30483533155586L6590.472261583158,229.606427397867"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-W" id="L-B-W-0"

d="M3761.7734375,132.71954291366873L4299.761067708333,139.5657649280573C4837.748697916667,146.41198694244582,59
13.723958333333,160.1044309712229,6451.78790498806,176.5575818975493C6989.851851642786,193.0107328238757,6990.00
4484535571,212.2245906477514,6990.080800981964,221.83151955968924L6990.157117428357,231.43844847162708"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-X" id="L-B-X-0"

d="M3761.7734375,132.64216733505577L4370.833333333333,139.50128527921314C4979.893229166667,146.36040322337053,6
198.013020833333,160.07863911168525,6807.143397033094,171.78107973619032C7416.273773232852,183.48352036069537,7
416.414733965704,193.17016572139073,7416.48521433213,198.0134884017384L7416.555694698557,202.8568110820861"/><pa
th marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-B LE-Y" id="L-B-Y-0"

d="M3761.7734375,132.58189874627706L4440.434244791667,139.45106145523087C5119.095052083333,146.3202241641847,64
76.416666666667,160.05854958209235,7155.154653483204,178.0059889351256C7833.892640299741,195.95342828815885,783
4.046999349482,218.10998157631767,7834.124178874353,229.1882582203971L7834.201358399222,240.26653486447654"/><pa
th marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-B LE-A" id="L-B-A-0"

d="M3722.207835477941,115.296875L3726.7383003982845,109.58854166666667C3731.268765318627,103.88020833333333,374
0.3296951593134,92.46354166666667,3740.8625655357114,81.06166458892592C3741.395435912109,69.65978751118517,3733.
4002468242174,58.27270002237032,3729.402652280272,52.57915627796291L3725.405057736326,46.88561253355549"/></g><g
class="edgeLabels"><g transform="translate(3668.4375, 81.046875)" class="edgeLabel"><g transform="translate(-28.296875, -9.25)"
class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Request</div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g

[illegible]

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class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;  
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g  
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;  
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class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;  
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g  
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;  
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g  
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;  
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white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g  
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white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g  
transform="translate(3749.390625, 81.046875)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"  
class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Response</span></div></foreignObject></g></g></g><g  
class="nodes"><g transform="translate(3708.9140625, 23.3984375)" id="flowchart-A-0" class="node default default  
flowchart-label"><circle height="33.5" width="46.796875" r="23.3984375" ry="0" rx="0" style=""/><g  
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
class="nodeLabel">User</span></div></foreignObject></g></q><q transform="translate(3708.9140625, 132.046875)"
```

id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="105.71875" y="-16.75" x="-52.859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-45.359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="90.71875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">constants.py</div></foreignObject></g></g><g transform="translate(70.38671875, 410.1640625)" id="flowchart-C-3" class="node default default flowchart-label"><polygon style="" transform="translate(-70.38671875,70.38671875)" class="label-container" points="70.38671875,0 140.7734375,-70.38671875 70.38671875,-140.7734375 0,-70.38671875"/><g transform="translate(-46.13671875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="92.2734375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">MEMGPT_DIR</div></foreignObject></g></g><g transform="translate(308.203125, 410.1640625)" id="flowchart-D-5" class="node default default flowchart-label"><polygon style="" transform="translate(-117.4296875,117.4296875)" class="label-container" points="117.4296875,0 234.859375,-117.4296875 117.4296875,-234.859375 0,-117.4296875"/><g transform="translate(-93.1796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="186.359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">DEFAULT_MEMGPT_MODEL</div></foreignObject></g></g><g transform="translate(596.0625, 410.1640625)" id="flowchart-E-7" class="node default default flowchart-label"><polygon style="" transform="translate(-120.4296875,120.4296875)" class="label-container" points="120.4296875,0 240.859375,-120.4296875 120.4296875,-240.859375 0,-120.4296875"/><g transform="translate(-96.1796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="192.359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">FIRST_MESSAGE_ATTEMPTS</div></foreignObject></g></g><g transform="translate(876.35546875, 410.1640625)" id="flowchart-F-9" class="node default default flowchart-label"><polygon style="" transform="translate(-109.86328125,109.86328125)" class="label-container" points="109.86328125,0 219.7265625,-109.86328125 109.86328125,-219.7265625 0,-109.86328125"/><g transform="translate(-85.61328125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="171.2265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">INITIAL_BOOT_MESSAGE</div></foreignObject></g></g><g transform="translate(1244.62890625, 410.1640625)" id="flowchart-G-11" class="node default default flowchart-label"><polygon style="" transform="translate(-208.41015625,208.41015625)" class="label-container" points="208.41015625,0 416.8203125,-208.41015625 208.41015625,-416.8203125 0,-208.41015625"/><g transform="translate(-184.16015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="368.3203125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">INITIAL_BOOT_MESSAGE_SEND_MESSAGE_THOUGHT</div></foreignObject></g></g><g transform="translate(1591.30078125, 410.1640625)" id="flowchart-H-13" class="node default default flowchart-label"><polygon style="" transform="translate(-88.26171875,88.26171875)" class="label-container" points="88.26171875,0 176.5234375,-88.26171875 88.26171875,-176.5234375 0,-88.26171875"/><g transform="translate(-64.01171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.0234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">STARTUP_QUOTES</div></foreignObject></g></g><g transform="translate(1940.9296875, 410.1640625)" id="flowchart-I-15" class="node default default flowchart-label"><polygon style="" transform="translate(-211.3671875,211.3671875)" class="label-container" points="211.3671875,0 422.734375,-211.3671875 211.3671875,-422.734375 0,-211.3671875"/><g transform="translate(-187.1171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="374.234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">INITIAL_BOOT_MESSAGE_SEND_MESSAGE_FIRST_MSG</div></foreignObject></g></g><g transform="translate(2291, 410.1640625)" id="flowchart-J-17" class="node default default flowchart-label"><polygon style="" transform="translate(-88.703125,88.703125)" class="label-container" points="88.703125,0 177.40625,-88.703125 88.703125,-177.40625 0,-88.703125"/><g transform="translate(-64.453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.90625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">LLM_MAX_TOKENS</div></foreignObject></g></g><g transform="translate(2584.1171875, 410.1640625)" id="flowchart-K-19" class="node default default flowchart-label"><polygon style="" transform="translate(-154.4140625,154.4140625)" class="label-container" points="154.4140625,0 308.828125,-154.4140625 154.4140625,-308.828125 0,-154.4140625"/><g transform="translate(-130.1640625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="260.328125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MESSAGE_SUMMARY_WARNING_FRAC</div></foreignObject></g></g><g

transform="translate(2937.734375, 410.1640625)" id="flowchart-L-21" class="node default default flowchart-label"><polygon style=""

transform="translate(-149.203125,149.203125)" class="label-container" points="149.203125,0 298.40625,-149.203125

149.203125,-298.40625 0,-149.203125"/><g transform="translate(-124.953125, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="249.90625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MESSAGE_SUMMARY_WARNING_STR</div></foreignObject></g></g><g

transform="translate(3310.1796875, 410.1640625)" id="flowchart-M-23" class="node default default flowchart-label"><polygon

style="" transform="translate(-173.2421875,173.2421875)" class="label-container" points="173.2421875,0 346.484375,-173.2421875

173.2421875,-346.484375 0,-173.2421875"/><g transform="translate(-148.9921875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="297.984375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MESSAGE_SUMMARY_TRUNC_TOKEN_FRAC</div></foreignObject></g></g><g

transform="translate(3708.9140625, 410.1640625)" id="flowchart-N-25" class="node default default flowchart-label"><polygon

style="" transform="translate(-175.4921875,175.4921875)" class="label-container" points="175.4921875,0 350.984375,-175.4921875

175.4921875,-350.984375 0,-175.4921875"/><g transform="translate(-151.2421875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="302.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MESSAGE_SUMMARY_TRUNC_KEEP_N_LAST</div></foreignObject></g></g><g

transform="translate(4094.97265625, 410.1640625)" id="flowchart-O-27" class="node default default flowchart-label"><polygon

style="" transform="translate(-160.56640625,160.56640625)" class="label-container" points="160.56640625,0

321.1328125,-160.56640625 160.56640625,-321.1328125 0,-160.56640625"/><g transform="translate(-136.31640625, -9.25)"

style="" class="label"><rect/><foreignObject height="18.5" width="272.6328125"><div style="display: inline-block; white-space:

nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">CORE_MEMORY_PERSONA_CHAR_LIMIT</div></foreignObject></g></g><g

transform="translate(4459.5625, 410.1640625)" id="flowchart-P-29" class="node default default flowchart-label"><polygon style=""

transform="translate(-154.0234375,154.0234375)" class="label-container" points="154.0234375,0 308.046875,-154.0234375

154.0234375,-308.046875 0,-154.0234375"/><g transform="translate(-129.7734375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="259.546875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">CORE_MEMORY_HUMAN_CHAR_LIMIT</div></foreignObject></g></g><g

transform="translate(4777.140625, 410.1640625)" id="flowchart-Q-31" class="node default default flowchart-label"><polygon style=""

transform="translate(-113.5546875,113.5546875)" class="label-container" points="113.5546875,0 227.109375,-113.5546875

113.5546875,-227.109375 0,-113.5546875"/><g transform="translate(-89.3046875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="178.609375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MAX_PAUSE_HEARTBEATS</div></foreignObject></g></g><g transform="translate(5103.67578125,

410.1640625)" id="flowchart-R-33" class="node default default flowchart-label"><polygon style=""

transform="translate(-162.98046875,162.98046875)" class="label-container" points="162.98046875,0 325.9609375,-162.98046875

162.98046875,-325.9609375 0,-162.98046875"/><g transform="translate(-138.73046875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="277.4609375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MESSAGE_CHATGPT_FUNCTION_MODEL</div></foreignObject></g></g><g

transform="translate(5518.45703125, 410.1640625)" id="flowchart-S-35" class="node default default flowchart-label"><polygon

style="" transform="translate(-201.80078125,201.80078125)" class="label-container" points="201.80078125,0

403.6015625,-201.80078125 201.80078125,-403.6015625 0,-201.80078125"/><g transform="translate(-177.55078125, -9.25)"

style="" class="label"><rect/><foreignObject height="18.5" width="355.1015625"><div style="display: inline-block; white-space:

nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MESSAGE_CHATGPT_FUNCTION_SYSTEM_MESSAGE</div></foreignObject></g></g><g

transform="translate(5889.92578125, 410.1640625)" id="flowchart-T-37" class="node default default flowchart-label"><polygon

style="" transform="translate(-119.66796875,119.66796875)" class="label-container" points="119.66796875,0
239.3359375,-119.66796875 119.66796875,-239.3359375 0,-119.66796875"/><g transform="translate(-95.41796875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="190.8359375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">REQ_HEARTBEAT_MESSAGE</div></foreignObject></g></g><g transform="translate(6211.92578125,
410.1640625)" id="flowchart-U-39" class="node default default flowchart-label"><polygon style=""
transform="translate(-152.33203125,152.33203125)" class="label-container" points="152.33203125,0 304.6640625,-152.33203125
152.33203125,-304.6640625 0,-152.33203125"/><g transform="translate(-128.08203125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="256.1640625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">FUNC_FAILED_HEARTBEAT_MESSAGE</div></foreignObject></g></g><g
transform="translate(6590.015625, 410.1640625)" id="flowchart-V-41" class="node default default flowchart-label"><polygon style=""
transform="translate(-175.7578125,175.7578125)" class="label-container" points="175.7578125,0 351.515625,-175.7578125
175.7578125,-351.515625 0,-175.7578125"/><g transform="translate(-151.5078125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="303.015625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">FUNCTION_PARAM_NAME_REQ_HEARTBEAT</div></foreignObject></g></g><g
transform="translate(6989.69921875, 410.1640625)" id="flowchart-W-43" class="node default default flowchart-label"><polygon
style="" transform="translate(-173.92578125,173.92578125)" class="label-container" points="173.92578125,0
347.8515625,-173.92578125 173.92578125,-347.8515625 0,-173.92578125"/><g transform="translate(-149.67578125, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="299.3515625"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">FUNCTION_PARAM_TYPE_REQ_HEARTBEAT</div></foreignObject></g></g><g
transform="translate(7416.1328125, 410.1640625)" id="flowchart-X-45" class="node default default flowchart-label"><polygon
style="" transform="translate(-202.5078125,202.5078125)" class="label-container" points="202.5078125,0 405.015625,-202.5078125
202.5078125,-405.015625 0,-202.5078125"/><g transform="translate(-178.2578125, -9.25)" style=""

```
class="label"><rect/><foreignObject height="18.5" width="356.515625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">FUNCTION_PARAM_DESCRIPTION_REQ_HEARTBEAT</span></div></foreignObject></g></g><g
transform="translate(7833.73828125, 410.1640625)" id="flowchart-Y-47" class="node default default flowchart-label"><polygon
style="" transform="translate(-165.09765625,165.09765625)" class="label-container" points="165.09765625,0
330.1953125,-165.09765625 165.09765625,-330.1953125 0,-165.09765625"/><g transform="translate(-140.84765625, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="281.6953125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">RETRIEVAL_QUERY_DEFAULT_PAGE_SIZE</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-21.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-21.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 565.9453125 133" style="max-width:
565.945px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
```

```
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M84.09636976047904,41.75L91.86676646706587,37.583333333333336C99.6371631736527,33.416666666666664,115.177956
58682634,25.083333333333332,127.56501996007985,20.916666666666668C139.95208333333332,16.75,149.18541666666667,16
```

.75,153.80208333333334,16.75L158.41875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"

d="M84.09636976047904,75.25L91.86676646706587,79.41666666666667C99.6371631736527,83.58333333333333,115.17795658

682634,91.91666666666667,126.23168662674652,96.08333333333333C137.28541666666666,100.25,143.85208333333333,100.2

5,147.13541666666666,100.25L150.41875,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M285.4140625,16.75L290.9140625,16.75C296.4140625,16.75,307.4140625,16.75,316.19739583333336,16.75C324.980729166

66666,16.75,331.5473958333333,16.75,334.8307291666667,16.75L338.1140625,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-E" id="L-C-E-0"

d="M293.4140625,100.25L297.5807291666667,100.25C301.7473958333333,100.25,310.0807291666667,100.25,317.760546875,10

0.25C325.44036458333335,100.25,332.46666666666664,100.25,335.9798177083333,100.25L339.49296875,100.25"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D

LE-F" id="L-D-F-0"

d="M403.8359375,16.75L408.0026041666667,16.75C412.1692708333333,16.75,420.5026041666667,16.75,431.19322988977495,2

0.47837527511751C441.8838556128832,24.206750550235018,454.93177372576633,31.663501100470032,461.4557327822079,3

5.39187637558754L467.9796918386495,39.12025165070505"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"

d="M402.45703125,100.25L406.853515625,100.25C411.25,100.25,420.04296875,100.25,430.9634121814416,96.52162472488249

C441.8838556128832,92.79324944976499,454.93177372576633,85.33649889952999,461.4557327822079,81.60812362441247L4

67.9796918386495,77.87974834929496"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)"

class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(52.859375, 58.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="105.71875" y="-16.75" x="-52.859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-45.359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="90.71875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">constants.py</div></foreignObject></g></g><g transform="translate(224.56640625, 16.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="121.6953125" y="-16.75" x="-60.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.34765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="106.6953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">DEFAULT_PORT</div></foreignObject></g></g><g transform="translate(224.56640625, 100.25)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="137.6953125" y="-16.75" x="-68.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-61.34765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="122.6953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">CLIENT_TIMEOUT</div></foreignObject></g></g><g transform="translate(373.625, 16.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="60.421875" y="-16.75" x="-30.2109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-22.7109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="45.421875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Server</div></foreignObject></g></g><g transform="translate(373.625, 100.25)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"


```
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M133.4565239448052,69.5L153.07119182900433,59.458333333333336C172.68585971320348,49.416666666666664,211.9151
9548160173,29.333333333333332,243.01879159266653,41.428991574041156C274.12238770373136,53.524649814748976,297.1
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0024415746267,97.79929962949795,308.5891723843283,119.93662453687243L320.078100611194,142.07394944424692"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-1"

d="M166.1747666396104,69.5L180.33639407467535,65.875C194.49802150974028,62.25,222.82127637987014,55,247.755224435
4109,67.51897306994236C272.68917249095165,80.03794613988474,294.23381373190324,112.32589227976946,305.006134352
37904,128.46986534971185L315.77845497285483,144.6138384196542"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-2"

d="M201.4765625,86.25L209.75455729166666,86.25C218.03255208333334,86.25,234.58854166666666,86.25,252.670239004175
44,96.74453604698711C270.7519363416842,107.2390720939742,290.3593414333684,128.2281441879484,300.1630439792105,1
38.72268023493552L309.9667465250526,149.21721628192262"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-3"

d="M166.1747666396104,103L180.33639407467535,106.625C194.49802150974028,110.25,222.82127637987014,117.5,245.58150
556960553,126.64770954648743C268.3417347593409,135.7954190929749,285.5389382686819,146.8408381859498,294.137540
0233523,152.36354773243724L302.7361417780228,157.8862572789247"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-4"

d="M133.4565239448052,103L153.07119182900433,113.04166666666667C172.68585971320348,123.08333333333333,211.91519
548160173,143.16666666666666,239.09273458121746,154.82749352751063C266.2702736808332,166.4883203883546,281.3960
1611166637,169.7266407767092,288.958887327083,171.34580097088647L296.5217585424996,172.96496116506378"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-B" id="L-C-B-0"

d="M133.4565239448052,262L153.07119182900433,251.95833333333334C172.68585971320348,241.91666666666666,211.91519
548160173,221.83333333333334,239.09273458121746,210.17250647248935C266.2702736808332,198.5116796116454,281.3960
1611166637,195.27335922329084,288.958887327083,193.65419902911353L296.5217585424996,192.03503883493622"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-B" id="L-C-B-1"

d="M166.1747666396104,262L180.33639407467535,258.375C194.49802150974028,254.75,222.82127637987014,247.5,245.58150

556960553,238.35229045351255C268.3417347593409,229.20458090702513,285.5389382686819,218.1591618140502,294.13754

00233523,212.63645226756276L302.7361417780228,207.1137427210753"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-B" id="L-C-B-2"

d="M175.33984375,278.75L187.97395833333334,278.75C200.60807291666666,278.75,225.87630208333334,278.75,248.3141192

1250879,268.2554639530129C270.7519363416842,257.76092790602576,290.3593414333684,236.7718558120516,300.16304397

92105,226.27731976506448L309.9667465250526,215.78278371807738"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-B" id="L-C-B-3"

d="M166.1747666396104,295.5L180.33639407467535,299.125C194.49802150974028,302.75,222.82127637987014,310,247.75522

44354109,297.4810269300576C272.68917249095165,284.96205386011525,294.23381373190324,252.67410772023052,305.0061

3435237904,236.53013465028815L315.77845497285483,220.3861615803458"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-B" id="L-C-B-4"

d="M133.4565239448052,295.5L153.07119182900433,305.5416666666667C172.68585971320348,315.5833333333333,211.91519

548160173,335.6666666666667,243.01879159266653,323.57100842595884C274.12238770373136,311.47535018525105,297.100

24415746267,267.20070037050203,308.5891723843283,245.06337546312758L320.078100611194,222.92605055575308"/></g><g

class="edgeLabels"><g transform="translate(251.14453125, 9.25)" class="edgeLabel"><g transform="translate(-20.53515625, -9.25)"

class="label"><foreignObject height="18.5" width="41.0703125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">insert</div></foreignObject></g></g><g

transform="translate(251.14453125, 47.75)" class="edgeLabel"><g transform="translate(-11.55078125, -9.25)"

class="label"><foreignObject height="18.5" width="23.1015625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">get</div></foreignObject></g></g><g

transform="translate(251.14453125, 86.25)" class="edgeLabel"><g transform="translate(-23.078125, -9.25)"

class="label"><foreignObject height="18.5" width="46.15625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">delete</div></foreignObject></g></g><g

transform="translate(251.14453125, 124.75)" class="edgeLabel"><g transform="translate(-20.24609375, -9.25)"

class="label"><foreignObject height="18.5" width="40.4921875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">query</div></foreignObject></g></g><g
transform="translate(251.14453125, 163.25)" class="edgeLabel"><g transform="translate(-24.66796875, -9.25)"
class="label"><foreignObject height="18.5" width="49.3359375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get_all</div></foreignObject></g></g><g
transform="translate(251.14453125, 201.75)" class="edgeLabel"><g transform="translate(-20.53515625, -9.25)"
class="label"><foreignObject height="18.5" width="41.0703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">insert</div></foreignObject></g></g><g
transform="translate(251.14453125, 240.25)" class="edgeLabel"><g transform="translate(-11.55078125, -9.25)"
class="label"><foreignObject height="18.5" width="23.1015625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get</div></foreignObject></g></g><g
transform="translate(251.14453125, 278.75)" class="edgeLabel"><g transform="translate(-23.078125, -9.25)"
class="label"><foreignObject height="18.5" width="46.15625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">delete</div></foreignObject></g></g><g
transform="translate(251.14453125, 317.25)" class="edgeLabel"><g transform="translate(-20.24609375, -9.25)"
class="label"><foreignObject height="18.5" width="40.4921875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">query</div></foreignObject></g></g><g
transform="translate(251.14453125, 355.75)" class="edgeLabel"><g transform="translate(-24.66796875, -9.25)"
class="label"><foreignObject height="18.5" width="49.3359375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get_all</div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(100.73828125, 86.25)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="201.4765625" y="-16.75" x="-100.73828125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-93.23828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="186.4765625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">PostgresStorageConnector</div></foreignObject></g></g><g transform="translate(341.05859375,
182.5)" id="flowchart-B-1" class="node default default flowchart-label"><circle height="33.5" width="80.4921875" r="40.24609375"
ry="0" rx="0" style=""><g transform="translate(-32.74609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

```
width="65.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Database</span></div></foreignObject></g></g><g transform="translate(100.73828125, 278.75)"
id="flowchart-C-10" class="node default default flowchart-label"><rect height="33.5" width="149.203125" y="-16.75" x="-74.6015625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.1015625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="134.203125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LanceDBConnector</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-23.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-23.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 504.71875 103" style="max-width: 504.719px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
```

```
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-User LE-System" id="L-User-System-0"

d="M46.796875,38.941149718028015L57.212239583333336,35.24262476502334C67.62760416666667,31.544099812018676,88.4
58333333333333,24.14704990600934,110.25924479166667,20.448524953004668C132.06015625,16.75,154.83124999999998,16.7
5,166.216796875,16.75L177.60234375,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-System LE-Processing" id="L-System-Processing-0"
```

d="M248.31640625,16.75L261.8671875,16.75C275.41796875,16.75,302.51953125,16.75,326.91393942415465,19.6349338634250
9C351.30834759830924,22.51986772685018,372.9956014466186,28.28973545370036,383.83922837077324,31.17466931712545
L394.6828552949279,34.05960318055054"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-Processing LE-User" id="L-Processing-User-0"
d="M399.8046875,59.07773953932125L388.107421875,62.189782949434374C376.41015625,65.30182635954749,353.015625,71.
52591317977375,322.31640625,74.63795658988688C291.6171875,77.75,253.61328125,77.75,216.89127604166666,77.75C180.1
6927083333334,77.75,144.72916666666666,77.75,117.42615854200297,74.34706563713355C90.12315041733928,70.944131274
26711,70.95723833467856,64.13826254853421,61.374282293348195,60.73532818566776L51.79132625201784,57.33239382280
1315"/></g><g class="edgeLabels"><g transform="translate(109.2890625, 16.75)" class="edgeLabel"><g
transform="translate(-37.4921875, -9.25)" class="label"><foreignObject height="18.5" width="74.984375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Input
Data</div></foreignObject></g></g><g transform="translate(329.62109375, 16.75)" class="edgeLabel"><g
transform="translate(-45.18359375, -9.25)" class="label"><foreignObject height="18.5" width="90.3671875"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Process
Data</div></foreignObject></g></g><g transform="translate(215.609375, 77.75)" class="edgeLabel"><g
transform="translate(-43.828125, -9.25)" class="label"><foreignObject height="18.5" width="87.65625"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Output
Data</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(23.3984375, 47.25)"
id="flowchart-User-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g
transform="translate(215.609375, 16.75)" id="flowchart-System-1" class="node default default flowchart-label"><rect height="33.5"
width="65.4140625" y="-16.75" x="-32.70703125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-25.20703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="50.4140625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

```

class="nodeLabel">System</span></div></foreignObject></g></g><g transform="translate(444.26171875, 47.25)"
id="flowchart-Processing-3" class="node default default flowchart-label"><rect height="33.5" width="88.9140625" y="-16.75"
x="-44.45703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-36.95703125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="73.9140625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Processing</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-24.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-24.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1384.1875 545.5" style="max-width:
1384.19px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

```

```
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M79.07751684131736,125.25L98.07110778443113,107.16666666666667C117.06469872754491,89.08333333333333,155.0518
8061377245,52.916666666666664,196.5032840568862,34.833333333333336C237.9546875,16.75,282.8703125,16.75,305.328125,
16.75L327.7859375,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"
d="M114.2638005239521,125.25L127.3930108532934,121.08333333333333C140.52222118263475,116.91666666666667,166.780
```

64184131736,108.58333333333333,204.28693550399203,104.41666666666667C241.7932291666667,100.25,290.54739583333333,
100.25,314.9244791666667,100.25L339.3015625,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"
d="M114.2638005239521,158.75L127.3930108532934,162.91666666666666C140.52222118263475,167.08333333333334,166.780
64184131736,175.41666666666666,190.70490425399203,179.58333333333334C214.6291666666667,183.75,236.21927083333333
3,183.75,247.01432291666666,183.75L257.809375,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0"
d="M79.07751684131736,158.75L98.07110778443113,176.83333333333334C117.06469872754491,194.91666666666666,155.051
88061377245,231.08333333333334,188.72528926521954,249.16666666666666C222.3986979166667,267.25,251.75833333333333
3,267.25,266.4381510416667,267.25L281.11796875,267.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"
d="M394.8912033260302,250.5L418.4132423550252,239.32552083333334C441.93528138402013,228.15104166666666,488.9793
594420101,205.80208333333334,528.4618151376717,194.62760416666666C567.9442708333333,183.453125,599.865104166666
7,183.453125,615.8255208333334,183.453125L631.7859375,183.453125"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-G" id="L-E-G-0"
d="M394.8912033260302,284L418.4132423550252,295.1744791666667C441.93528138402013,306.34895833333333,488.97935944
20101,328.6979166666667,525.0126134824899,339.950233663676C561.0458675229696,351.20255066068535,586.06829754593
91,351.3582263213707,598.579512557424,351.4360641517133L611.0907275689087,351.513901982056"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G
LE-H" id="L-G-H-0"
d="M781.5978666192666,315.0666166192666L794.8217898910556,307.4409305160555C808.0457131628444,299.815244412844
4,834.4935597064223,284.5638722064222,858.1219100615444,276.9381861032111C881.7502604166666,269.3125,902.5591145
833333,269.3125,912.9635416666666,269.3125L923.36796875,269.3125"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-I" id="L-G-I-0"
d="M781.5978666192666,388.0271333807334L794.8217898910556,395.4861528172778C808.0457131628444,402.945172253822
25,834.4935597064223,417.86321112691115,854.14475390378,425.395495384764C873.7959481011379,432.92777964261694,88

6.6504899522757,433.0743092852338,893.0777608778448,433.1475741065423L899.5050318034135,433.2208389278508"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-J" id="L-I-J-0"

d="M1076.0348361068443,411.0738986068444L1086.8799415473702,407.7334571723704C1097.7250469878961,404.3930157378963,1119.4152578689482,397.7121328689482,1139.8548945594741,394.3716914344741C1160.2945312499999,391.03125,1179.48359375,391.03125,1189.078125,391.03125L1198.67265625,391.03125"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-K" id="L-I-K-0"

d="M1076.0348361068443,455.4886013931556L1086.8799415473702,458.662376160963C1097.7250469878961,461.8361509287704,1119.4152578689482,468.18370046438514,1136.6042435178074,471.3574752321926C1153.7932291666666,474.53125,1166.4809895833334,474.53125,1172.8248697916667,474.53125L1179.16875,474.53125"/></g><g class="edgeLabels"><g transform="translate(193.0390625, 16.75)" class="edgeLabel"><g transform="translate(-23.953125, -9.25)" class="label"><foreignObject height="18.5" width="47.90625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">import</div></foreignObject></g></g><g transform="translate(193.0390625, 100.25)" class="edgeLabel"><g transform="translate(-23.953125, -9.25)" class="label"><foreignObject height="18.5" width="47.90625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">import</div></foreignObject></g></g><g transform="translate(193.0390625, 183.75)" class="edgeLabel"><g transform="translate(-23.953125, -9.25)" class="label"><foreignObject height="18.5" width="47.90625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">import</div></foreignObject></g></g><g transform="translate(193.0390625, 267.25)" class="edgeLabel"><g transform="translate(-45.0703125, -9.25)" class="label"><foreignObject height="18.5" width="90.140625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">function call</div></foreignObject></g></g><g transform="translate(536.0234375, 183.453125)" class="edgeLabel"><g transform="translate(-39.6015625, -9.25)" class="label"><foreignObject height="18.5" width="79.203125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">load config</div></foreignObject></g></g><g transform="translate(536.0234375, 351.046875)" class="edgeLabel"><g transform="translate(-54.8671875, -9.25)"

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class="label"><foreignObject height="18.5" width="109.734375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">check endpoint</span></div></foreignObject></g></g><g
transform="translate(860.94140625, 269.3125)" class="edgeLabel"><g transform="translate(-15.609375, -9.25)"
class="label"><foreignObject height="18.5" width="31.21875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">True</span></div></foreignObject></g></g><g
transform="translate(860.94140625, 432.78125)" class="edgeLabel"><g transform="translate(-18.36328125, -9.25)"
class="label"><foreignObject height="18.5" width="36.7265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">False</span></div></foreignObject></g></g><g
transform="translate(1141.10546875, 391.03125)" class="edgeLabel"><g transform="translate(-15.609375, -9.25)"
class="label"><foreignObject height="18.5" width="31.21875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">True</span></div></foreignObject></g></g><g
transform="translate(1141.10546875, 474.53125)" class="edgeLabel"><g transform="translate(-18.36328125, -9.25)"
class="label"><foreignObject height="18.5" width="36.7265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">False</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(61.484375, 142)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="122.96875" y="-16.75" x="-61.484375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-53.984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.96875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">embeddings.py</span></div></foreignObject></g></g><g transform="translate(359.6328125, 16.75)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="53.09375" y="-16.75" x="-26.546875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-19.046875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="38.09375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">typer</span></div></foreignObject></g></g><g
transform="translate(359.6328125, 100.25)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"
width="30.0625" y="-16.75" x="-15.03125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-7.53125,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="15.0625"><div style="display: inline-block; white-space:
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nowrap;" xmlns="http://www.w3.org/1999/xhtml">os</div></foreignObject></g></g><g
transform="translate(359.6328125, 183.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"
width="193.046875" y="-16.75" x="-96.5234375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-89.0234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="178.046875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">llama_index.embeddings</div></foreignObject></g></g><g transform="translate(359.6328125, 267.25)"
id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="146.4296875" y="-16.75"
x="-73.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.71484375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">embedding_model</div></foreignObject></g></g><g
transform="translate(716.734375, 183.453125)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5"
width="159.296875" y="-16.75" x="-79.6484375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-72.1484375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="144.296875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">MemGPTConfig.load</div></foreignObject></g></g><g transform="translate(716.734375, 351.046875)"
id="flowchart-G-11" class="node default default flowchart-label"><polygon style="" transform="translate(-100.84375,100.84375)"
class="label-container" points="100.84375,0 201.6875,-100.84375 100.84375,-201.6875 0,-100.84375"/><g
transform="translate(-76.59375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="153.1875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">if endpoint ==
openai</div></foreignObject></g></g><g transform="translate(1001.0234375, 269.3125)" id="flowchart-H-13" class="node
default default flowchart-label"><rect height="33.5" width="144.7109375" y="-16.75" x="-72.35546875" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-64.85546875, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="129.7109375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">OpenAIEmbedding</div></foreignObject></g></g><g
transform="translate(1001.0234375, 432.78125)" id="flowchart-I-15" class="node default default flowchart-label"><polygon style=""
transform="translate(-96.71875,96.71875)" class="label-container" points="96.71875,0 193.4375,-96.71875 96.71875,-193.4375

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0,-96.71875"/><g transform="translate(-72.46875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="144.9375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">if endpoint == azure</span></div></foreignObject></g></g><g transform="translate(1276.328125, 391.03125)"
id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="144.7109375" y="-16.75"
x="-72.35546875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-64.85546875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="129.7109375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">OpenAIEmbedding</span></div></foreignObject></g></g><g
transform="translate(1276.328125, 474.53125)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="33.5"
width="183.71875" y="-16.75" x="-91.859375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-84.359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="168.71875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">HuggingFaceEmbedding</span></div></foreignObject></g></g></g></g></svg>

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High_Level_Doc-25.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-25.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 594.015625 216.5" style="max-width:
594.016px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

```

```
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
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edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M273.33984375,33.5L273.33984375,37.666666666666664C273.33984375,41.833333333333336,273.33984375,50.166666666666664,273.33984375,57.616666666666667C273.33984375,65.066666666666666,273.33984375,71.633333333333334,273.33984375,74.916666666666667L273.33984375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M234.15625,108.82868511614568L208.904296875,114.35723759678807C183.65234375,119.88579007743044,133.1484375,130.94289503871522,107.896484375,139.75478085269094C82.64453125,148.56666666666666,82.64453125,155.13333333333333,82.64453125,158.41666666666666L82.64453125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M273.33984375,117L273.33984375,121.16666666666667C273.33984375,125.33333333333333,273.33984375,133.66666666666666,273.33984375,141.11666666666667C273.33984375,148.56666666666666,273.33984375,155.13333333333333,273.33984375,158.41666666666666L273.33984375,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0"

d="M312.5234375,108.17735524049291L340.38671875,113.81446270041077C368.25,119.45157016032861,423.9765625,130.72578508016431,451.83984375,139.6462258734155C479.703125,148.56666666666666,479.703125,155.13333333333333,479.703125,158.41666666666666L479.703125,161.7"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)"

class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g

transform="translate(273.33984375, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"

width="80.125" y="-16.75" x="-40.0625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-32.5625,

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-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="65.125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">errors.py</span></div></foreignObject></g></g><g
transform="translate(273.33984375, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="78.3671875" y="-16.75" x="-39.18359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-31.68359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="63.3671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LLMError</span></div></foreignObject></g></g><g transform="translate(82.64453125, 183.75)"
id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5" width="165.2890625" y="-16.75"
x="-82.64453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-75.14453125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="150.2890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">LLMJSONParsingError</span></div></foreignObject></g></g><g
transform="translate(273.33984375, 183.75)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5"
width="116.1015625" y="-16.75" x="-58.05078125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-50.55078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="101.1015625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LocalLLMError</span></div></foreignObject></g></g><g transform="translate(479.703125, 183.75)"
id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5" width="196.625" y="-16.75" x="-98.3125" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-90.8125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="181.625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LocalLLMConnectionError</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-26.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-26.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 793.828125 133" style="max-width:
793.828px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg

```

.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 10 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 I 9,9 M 10,1 I -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 I 9,9 M 10,1 I -9,9"/></marker><g class="root"><g class="clusters"/><g class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0" d="M226.0234375,23.954344854842162L193.30989583333334,29.711954045701802C160.59635416666666,35.46956323656144,95.16927083333333,46.98478161828072,62.455729166666664,56.025724142473685C29.7421875,65.06666666666666,29.7421875,71.63333333333334,29.7421875,74.91666666666667L29.7421875,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0" d="M226.0234375,28.74775812422871L209.10546875,33.706465103523925C192.1875,38.66517208281914,158.3515625,48.58258604140957,141.43359375,56.82462635403812C124.515625,65.06666666666666,124.515625,71.63333333333334,124.515625,74.91666666666667L124.515625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0" d="M244.8613866017964,33.5L239.36495758483034,37.666666666666664C233.86852856786427,41.833333333333336,222.87567053393215,50.166666666666664,217.37924151696606,57.61666666666667C211.8828125,65.06666666666666,211.8828125,71.63333333333334,211.8828125,74.91666666666667L211.8828125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0" d="M289.0526758982036,33.5L294.54910491516966,37.666666666666664C300.0455339321357,41.833333333333336,311.0383919660679,50.166666666666664,316.53482098303397,57.61666666666667C322.03125,65.06666666666666,322.03125,71.63333333333334,322.03125,74.91666666666667L322.03125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0" d="M307.890625,24.638821270150384L337.173828125,30.282351058458655C366.45703125,35.92588084676692,425.0234375,47

.21294042338346,454.306640625,56.13980354502507C483.58984375,65.06666666666666,483.58984375,71.63333333333334,48
3.58984375,74.91666666666667L483.58984375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-G" id="L-A-G-0"
d="M307.890625,20.7652188876652L372.005859375,27.05434907305433C436.12109375,33.343479258443466,564.3515625,45.9
21739629221726,628.466796875,55.4942031479442C692.58203125,65.06666666666666,692.58203125,71.63333333333334,692.
58203125,74.91666666666667L692.58203125,78.2"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0,
0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g
transform="translate(266.95703125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="81.8671875" y="-16.75" x="-40.93359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-33.43359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="66.8671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">extras.py</div></foreignObject></g></g><g transform="translate(29.7421875, 100.25)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="59.484375" y="-16.75" x="-29.7421875" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-22.2421875, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="44.484375"><div style="display: inline-block; white-space: nowrap;"

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xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">typing</span></div></foreignObject></g></g><g
transform="translate(124.515625, 100.25)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5"
width="30.0625" y="-16.75" x="-15.03125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-7.53125,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="15.0625"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">os</span></div></foreignObject></g></g><g
transform="translate(211.8828125, 100.25)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5"
width="44.671875" y="-16.75" x="-22.3359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-14.8359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="29.671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">json</span></div></foreignObject></g></g><g transform="translate(322.03125, 100.25)" id="flowchart-E-4"
class="node default default flowchart-label"><rect height="33.5" width="75.625" y="-16.75" x="-37.8125" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-30.3125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="60.625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">requests</span></div></foreignObject></g></g><g transform="translate(483.58984375, 100.25)"
id="flowchart-F-5" class="node default default flowchart-label"><rect height="33.5" width="147.4921875" y="-16.75"
x="-73.74609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-66.24609375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="132.4921875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">memgpt.constants</span></div></foreignObject></g></g><g
transform="translate(692.58203125, 100.25)" id="flowchart-G-6" class="node default default flowchart-label"><rect height="33.5"
width="170.4921875" y="-16.75" x="-85.24609375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-77.74609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="155.4921875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">memgpt.openai_tools</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-27.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-27.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1442.095703125 253.5"
style="max-width: 1442.1px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

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```
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M360.953125,25.21503457157504L317.5260416666667,32.304195476312536C274.0989583333333,39.393356381050026,187.
24479166666666,53.57167819052501,143.81770833333334,65.4858390952625C100.390625,77.39999999999999,100.390625,87.
05,100.390625,91.875L100.390625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"
d="M383.72445618872547,33.5L373.8126978656046,39.208333333333336C363.9009395424837,44.916666666666664,344.07742
289624184,56.333333333333336,334.1656645731209,66.86666666666666C324.25390625,77.39999999999999,324.25390625,87.
05,324.25390625,91.875L324.25390625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"
d="M441.89273131127453,33.5L451.80448963439545,39.208333333333336C461.7162479575163,44.916666666666664,481.5397
6460375816,56.333333333333336,491.4515229268791,66.86666666666666C501.36328125,77.39999999999999,501.36328125,87
.05,501.36328125,91.875L501.36328125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0"
d="M464.6640625,28.28580739150437L494.23046875,34.86317282625364C523.796875,41.440538261002914,582.9296875,54.59
```

526913050146,612.49609375,65.99763456525072C642.0625,77.39999999999999,642.0625,87.05,642.0625,91.875L642.0625,96.7

"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-F LE-G" id="L-F-G-0"

d="M836.72265625,33.5L836.72265625,39.208333333333336C836.72265625,44.916666666666664,836.72265625,56.3333333333

33336,836.72265625,66.86666666666666C836.72265625,77.39999999999999,836.72265625,87.05,836.72265625,91.875L836.722

65625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-H LE-I" id="L-H-I-0"

d="M1099.33984375,135.5L1099.33984375,141.20833333333334C1099.33984375,146.91666666666666,1099.33984375,158.3333

3333333334,1099.33984375,168.86666666666667C1099.33984375,179.4,1099.33984375,189.04999999999998,1099.33984375,19

3.875L1099.33984375,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-J LE-H" id="L-J-H-0"

d="M1019.263671875,33.5L1019.263671875,39.208333333333336C1019.263671875,44.916666666666664,1019.263671875,56.33

333333333336,1027.4813905924723,67.27547898283619C1035.6991093099443,78.21762463233905,1052.134546744889,88.68

524926467812,1060.3522654623612,93.91906158084765L1068.5699841798335,99.15287389701719"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-H" id="L-K-H-0"

d="M1179.416015625,33.5L1179.416015625,39.208333333333336C1179.416015625,44.916666666666664,1179.416015625,56.33

333333333336,1171.1982969075277,67.27547898283619C1162.9805781900557,78.21762463233905,1146.545140755111,88.68

524926467812,1138.3274220376388,93.91906158084765L1130.1097033201665,99.15287389701719"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-L

LE-M" id="L-L-M-0"

d="M1354.435546875,33.5L1354.435546875,39.208333333333336C1354.435546875,44.916666666666664,1354.435546875,56.33

333333333336,1354.435546875,66.86666666666666C1354.435546875,77.39999999999999,1354.435546875,87.05,1354.435546

875,91.875L1354.435546875,96.7"/></g><g class="edgeLabels"><g transform="translate(100.390625, 67.75)"

class="edgeLabel"><g transform="translate(-23.953125, -9.25)" class="label"><foreignObject height="18.5" width="47.90625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">import</div></foreignObject></g></g><g transform="translate(324.25390625, 67.75)"

class="edgeLabel"><g transform="translate(-23.953125, -9.25)" class="label"><foreignObject height="18.5" width="47.90625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">import</div></foreignObject></g></g><g transform="translate(501.36328125, 67.75)"

class="edgeLabel"><g transform="translate(-23.953125, -9.25)" class="label"><foreignObject height="18.5" width="47.90625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">import</div></foreignObject></g></g><g transform="translate(642.0625, 67.75)" class="edgeLabel"><g

transform="translate(-44.921875, -9.25)" class="label"><foreignObject height="18.5" width="89.84375"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">append

path</div></foreignObject></g></g><g transform="translate(836.72265625, 67.75)" class="edgeLabel"><g

transform="translate(-129.73828125, -9.25)" class="label"><foreignObject height="18.5" width="259.4765625"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">load functions and generate

schema</div></foreignObject></g></g><g transform="translate(1099.33984375, 169.75)" class="edgeLabel"><g

transform="translate(-75.25390625, -9.25)" class="label"><foreignObject height="18.5" width="150.5078125"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">load all function

sets</div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject

height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"

class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g

transform="translate(412.80859375, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"

width="103.7109375" y="-16.75" x="-51.85546875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-44.35546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="88.7109375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

```
class="nodeLabel">functions.py</span></div></foreignObject></g></g><g transform="translate(100.390625, 118.75)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="200.78125" y="-16.75" x="-100.390625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-92.890625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="185.78125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">importlib, inspect, os,
sys</span></div></foreignObject></g></g><g transform="translate(324.25390625, 118.75)" id="flowchart-C-3" class="node default
default flowchart-label"><rect height="33.5" width="146.9453125" y="-16.75" x="-73.47265625" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-65.97265625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="131.9453125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">schema_generator</span></div></foreignObject></g></g><g transform="translate(501.36328125, 118.75)"
id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="107.2734375" y="-16.75"
x="-53.63671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.13671875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="92.2734375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">MEMGPT_DIR</span></div></foreignObject></g></g><g
transform="translate(642.0625, 118.75)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"
width="74.125" y="-16.75" x="-37.0625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-29.5625,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="59.125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">sys.path</span></div></foreignObject></g></g><g
transform="translate(836.72265625, 16.75)" id="flowchart-F-8" class="node default default flowchart-label"><rect height="33.5"
width="143.5078125" y="-16.75" x="-71.75390625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.25390625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.5078125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">load_function_set</span></div></foreignObject></g></g><g transform="translate(836.72265625, 118.75)"
id="flowchart-G-9" class="node default default flowchart-label"><rect height="33.5" width="110.6875" y="-16.75" x="-55.34375" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-47.84375, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="95.6875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
```


class="nodeLabel">function_dict</div></foreignObject></g></g><g transform="translate(1099.33984375, 118.75)"

id="flowchart-H-10" class="node default default flowchart-label"><rect height="33.5" width="176.21875" y="-16.75" x="-88.109375"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-80.609375, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="161.21875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">load_all_function_sets</div></foreignObject></g></g><g

transform="translate(1099.33984375, 220.75)" id="flowchart-I-11" class="node default default flowchart-label"><rect height="33.5"

width="183.90625" y="-16.75" x="-91.953125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-84.453125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="168.90625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">schemas_and_functions</div></foreignObject></g></g><g transform="translate(1019.263671875,

16.75)" id="flowchart-J-12" class="node default default flowchart-label"><rect height="33.5" width="99.75" y="-16.75" x="-49.875"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-42.375, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="84.75"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">User Scripts</div></foreignObject></g></g><g

transform="translate(1179.416015625, 16.75)" id="flowchart-K-14" class="node default default flowchart-label"><rect height="33.5"

width="120.5546875" y="-16.75" x="-60.27734375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-52.77734375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="105.5546875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Built-in

Scripts</div></foreignObject></g></g><g transform="translate(1354.435546875, 16.75)" id="flowchart-L-16" class="node

default default flowchart-label"><rect height="33.5" width="59.984375" y="-16.75" x="-29.9921875" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-22.4921875, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"

width="44.984375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">merge</div></foreignObject></g></g><g transform="translate(1354.435546875, 118.75)"

id="flowchart-M-17" class="node default default flowchart-label"><rect height="33.5" width="143.3203125" y="-16.75"

x="-71.66015625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-64.16015625, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="128.3203125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">merged_functions</div></foreignObject></g></g></g></g></g></svg>

High_Level_Doc-28.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-28.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 545.12890625 383.5" style="max-width: 545.129px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#fffde;stroke:#aaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
```

```

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M256.34375,33.5L256.34375,37.666666666666664C256.34375,41.833333333333336,256.34375,50.166666666666664,256.343
75,57.616666666666667C256.34375,65.066666666666666,256.34375,71.633333333333334,256.34375,74.91666666666667L256.3437
5,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-C" id="L-B-C-0"

d="M202.1068488023952,117L188.61508233532936,121.16666666666667C175.1233158682635,125.33333333333333,148.139782
93413174,133.66666666666666,134.64801646706587,141.11666666666667C121.15625,148.56666666666666,121.15625,155.133
3333333333,121.15625,158.41666666666666L121.15625,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M310.58065119760477,117L324.07241766467064,121.16666666666667C337.5641841317365,125.33333333333333,364.54771

```

706586826,133.66666666666666,378.0394835329341,141.11666666666667C391.53125,148.56666666666666,391.53125,155.133

33333333333,391.53125,158.41666666666666L391.53125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"

d="M391.53125,200.5L391.53125,204.66666666666666C391.53125,208.83333333333334,391.53125,217.16666666666666,391.53

125,224.61666666666667C391.53125,232.06666666666667,391.53125,238.63333333333333,391.53125,241.91666666666666L391.

53125,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"

d="M391.53125,284L391.53125,288.16666666666667C391.53125,292.33333333333333,391.53125,300.66666666666667,391.53125,3

08.11666666666667C391.53125,315.56666666666666,391.53125,322.13333333333333,391.53125,325.41666666666667L391.53125,3

28.7"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0"

width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"

class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g

transform="translate(256.34375, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"

width="264.6796875" y="-16.75" x="-132.33984375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-124.83984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="249.6796875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">generate_embeddings_for_docs.py</div></foreignObject></g></g><g transform="translate(256.34375,

100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="180.25" y="-16.75" x="-90.125"

```

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-82.625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="165.25"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">generate_requests_file</span></div></foreignObject></g></g><g
transform="translate(121.15625, 183.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"
width="242.3125" y="-16.75" x="-121.15625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-113.65625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="227.3125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">process_api_requests_from_file</span></div></foreignObject></g></g><g transform="translate(391.53125,
183.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="198.4375" y="-16.75"
x="-99.21875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-91.71875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="183.4375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">generate_embedding_file</span></div></foreignObject></g></g><g transform="translate(391.53125, 267.25)"
id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="275.1953125" y="-16.75"
x="-137.59765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-130.09765625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="260.1953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">async_get_embedding_with_backoff</span></div></foreignObject></g></g><g transform="translate(391.53125,
350.75)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="137.6171875" y="-16.75"
x="-68.80859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-61.30859375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="122.6171875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Save
Embeddings</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-29.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-29.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 330.546875 1135" style="max-width:
330.547px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

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markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-User LE-send_message" id="L-User-send_message-0"

d="M24.892078823122986,542.75L32.709544852602484,455.0833333333333C40.52701088208199,367.4166666666667,56.16194

294104099,192.08333333333334,75.7106589705205,104.41666666666667C95.25937499999999,16.75,118.721875,16.75,130.453

125,16.75L142.184375,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-User LE-pause_heartbeats" id="L-User-pause_heartbeats-0"

d="M25.16364997278171,542.75L32.935854143984756,469C40.708058315187806,395.25,56.25246665759391,247.75,73.6237593

7046362,174C90.99505208333333,100.25,110.19322916666665,100.25,119.79231770833333,100.25L129.39140625,100.25"/><pa

th marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-User LE-message_chatgpt" id="L-User-message_chatgpt-0"

d="M25.555919411177644,542.75L33.26274534264804,482.9166666666667C40.96957127411843,423.0833333333333,56.383223

13705922,303.4166666666667,74.0009865685296,243.58333333333334C91.61874999999999,183.75,111.440625,183.75,121.351

5625,183.75L131.2625,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-core_memory_append"

id="L-User-core_memory_append-0"

d="M26.17234281437126,542.75L33.77643151197605,496.8333333333333C41.380520209580844,450.9166666666667,56.588697
```

60479042,359.08333333333333,71.13562484406187,313.1666666666667C85.68255208333333,267.25,99.56822916666665,267.25,
106.51106770833333,267.25L113.45390625,267.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-core_memory_replace"
id="L-User-core_memory_replace-0"
d="M27.28190494011976,542.75L34.70106661676647,510.75C42.12022829341317,478.75,56.95855164670659,414.75,71.235916
4483533,382.75C85.51328124999999,350.75,99.2296875,350.75,106.087890625,350.75L112.94609375,350.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-User LE-recall_memory_search" id="L-User-recall_memory_search-0"
d="M29.870883233532936,542.75L36.858548527944116,524.6666666666666C43.84621382235529,506.5833333333333,57.82154
441117765,470.4166666666667,71.49098053892216,452.3333333333333C85.16041666666666,434.25,98.52395833333333,434.2
5,105.20572916666667,434.25L111.8875,434.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-conversation_search" id="L-User-conversation_search-0"
d="M42.8157747005988,542.75L47.64595808383234,538.5833333333334C52.47614146706587,534.4166666666666,62.13650823
3532936,526.0833333333334,74.9765874500998,521.9166666666666C87.81666666666666,517.75,103.83645833333333,517.75,1
11.84635416666667,517.75L119.85625,517.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-recall_memory_search_date"
id="L-User-recall_memory_search_date-0"
d="M42.8157747005988,576.25L47.64595808383234,580.4166666666666C52.47614146706587,584.5833333333334,62.13650823
3532936,592.9166666666666,70.2500249500998,597.0833333333334C78.36354166666666,601.25,84.93020833333334,601.25,88
.21354166666667,601.25L91.496875,601.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-conversation_search_date"
id="L-User-conversation_search_date-0"
d="M29.870883233532936,576.25L36.858548527944116,594.3333333333334C43.84621382235529,612.4166666666666,57.82154
441117765,648.5833333333334,69.42066803892216,666.6666666666666C81.01979166666666,684.75,90.24270833333333,684.7
5,94.85416666666667,684.75L99.465625,684.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-archival_memory_insert"

id="L-User-archival_memory_insert-0"

d="M27.28190494011976,576.25L34.70106661676647,608.25C42.12022829341317,640.25,56.95855164670659,704.25,70.1695101983533,736.25C83.38046874999999,768.25,94.9640625,768.25,100.755859375,768.25L106.54765625,768.25"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-User LE-archival_memory_search" id="L-User-archival_memory_search-0"

d="M26.17234281437126,576.25L33.77643151197605,622.1666666666666C41.380520209580844,668.0833333333334,56.58869760479042,759.9166666666666,69.53276026072854,805.8333333333334C82.47682291666666,851.75,93.15677083333333,851.75,98.49674479166667,851.75L103.83671875,851.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-read_from_text_file" id="L-User-read_from_text_file-0"

d="M25.555919411177644,576.25L33.26274534264804,636.0833333333334C40.96957127411843,695.9166666666666,56.38322313705922,815.5833333333334,72.20346052686294,875.4166666666666C88.02369791666666,935.25,104.25052083333333,935.25,112.36393229166667,935.25L120.47734375,935.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-User LE-append_to_text_file" id="L-User-append_to_text_file-0"

d="M25.16364997278171,576.25L32.935854143984756,650C40.708058315187806,723.75,56.25246665759391,871.25,72.03131145379695,945C87.81015624999999,1018.75,103.8234375,1018.75,111.830078125,1018.75L119.83671875,1018.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-User LE-http_request" id="L-User-http_request-0"

d="M24.892078823122986,576.25L32.709544852602484,663.9166666666666C40.52701088208199,751.5833333333334,56.16194294104099,926.9166666666666,76.41834126218716,1014.5833333333334C96.67473958333333,1102.25,121.55260416666665,1102.25,133.99153645833334,1102.25L146.43046875,1102.25"/></g><g class="edgeLabels"><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

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transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="nodes"><g
transform="translate(23.3984375, 559.5)" id="flowchart-User-0" class="node default default flowchart-label"><rect height="33.5"
width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
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class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(205.671875, 16.75)"
id="flowchart-send_message-1" class="node default default flowchart-label"><rect height="33.5" width="116.375" y="-16.75"
x="-58.1875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-50.6875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="101.375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">send_message</span></div></foreignObject></g></g><g
transform="translate(205.671875, 100.25)" id="flowchart-pause_heartbeats-3" class="node default default flowchart-label"><rect
height="33.5" width="141.9609375" y="-16.75" x="-70.98046875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-63.48046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="126.9609375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">pause_heartbeats</span></div></foreignObject></g></g><g transform="translate(205.671875, 183.75)"
id="flowchart-message_chatgpt-5" class="node default default flowchart-label"><rect height="33.5" width="138.21875" y="-16.75"
x="-69.109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-61.609375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="123.21875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">message_chatgpt</span></div></foreignObject></g></g><g
transform="translate(205.671875, 267.25)" id="flowchart-core_memory_append-7" class="node default default flowchart-label"><rect
height="33.5" width="173.8359375" y="-16.75" x="-86.91796875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-79.41796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="158.8359375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">core_memory_append</span></div></foreignObject></g></g><g transform="translate(205.671875, 350.75)"
id="flowchart-core_memory_replace-9" class="node default default flowchart-label"><rect height="33.5" width="174.8515625"
y="-16.75" x="-87.42578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-79.92578125, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="159.8515625"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">core_memory_replace</span></div></foreignObject></g></g><g transform="translate(205.671875, 434.25)"
id="flowchart-recall_memory_search-11" class="node default default flowchart-label"><rect height="33.5" width="176.96875"
y="-16.75" x="-88.484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-80.984375, -9.25)" style=""
```

class="label"><rect/><foreignObject height="18.5" width="161.96875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">recall_memory_search</div></foreignObject></g></g><g
transform="translate(205.671875, 517.75)" id="flowchart-conversation_search-13" class="node default default flowchart-label"><rect
height="33.5" width="161.03125" y="-16.75" x="-80.515625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-73.015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="146.03125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">conversation_search</div></foreignObject></g></g><g transform="translate(205.671875, 601.25)"
id="flowchart-recall_memory_search_date-15" class="node default default flowchart-label"><rect height="33.5" width="217.75"
y="-16.75" x="-108.875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-101.375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="202.75"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">recall_memory_search_date</div></foreignObject></g></g><g transform="translate(205.671875,
684.75)" id="flowchart-conversation_search_date-17" class="node default default flowchart-label"><rect height="33.5"
width="201.8125" y="-16.75" x="-100.90625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-93.40625,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="186.8125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">conversation_search_date</div></foreignObject></g></g><g transform="translate(205.671875, 768.25)"
id="flowchart-archival_memory_insert-19" class="node default default flowchart-label"><rect height="33.5" width="187.6484375"
y="-16.75" x="-93.82421875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-86.32421875, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="172.6484375"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">archival_memory_insert</div></foreignObject></g></g><g transform="translate(205.671875, 851.75)"
id="flowchart-archival_memory_search-21" class="node default default flowchart-label"><rect height="33.5" width="193.0703125"
y="-16.75" x="-96.53515625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-89.03515625, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="178.0703125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

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class="nodeLabel">archival_memory_search</span></div></foreignObject></g></g><g transform="translate(205.671875, 935.25)"
id="flowchart-read_from_text_file-23" class="node default default flowchart-label"><rect height="33.5" width="159.7890625"
y="-16.75" x="-79.89453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-72.39453125, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="144.7890625"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">read_from_text_file</span></div></foreignObject></g></g><g transform="translate(205.671875, 1018.75)"
id="flowchart-append_to_text_file-25" class="node default default flowchart-label"><rect height="33.5" width="161.0703125"
y="-16.75" x="-80.53515625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-73.03515625, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="146.0703125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">append_to_text_file</span></div></foreignObject></g></g><g transform="translate(205.671875, 1102.25)"
id="flowchart-http_request-27" class="node default default flowchart-label"><rect height="33.5" width="107.8828125" y="-16.75"
x="-53.94140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.44140625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="92.8828125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">http_request</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-3.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-3.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 138.015625 450.078125"
```

```
style="max-width: 138.016px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
```

```
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
```

```
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
```

```
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
```

```
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
```

```
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
```

```
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
```

```
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M61.0078125,33.5L61.0078125,39.208333333333336C61.0078125,44.916666666666664,61.0078125,56.333333333333336,61.
0078125,66.866666666666666C61.0078125,77.39999999999999,61.0078125,87.05,61.0078125,91.875L61.0078125,96.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M61.0078125,182.7890625L61.0078125,188.49739583333334C61.0078125,194.20572916666666,61.0078125,205.6223958333
3334,61.0078125,216.15572916666667C61.0078125,226.6890625,61.0078125,236.33906249999998,61.0078125,241.1640625L61.
0078125,245.9890625"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"
d="M61.0078125,332.078125L61.0078125,337.7864583333333C61.0078125,343.4947916666667,61.0078125,354.9114583333333,
61.0078125,365.4447916666666C61.0078125,375.97812500000003,61.0078125,385.628125,61.0078125,390.453125L61.0078125,
395.278125"/></g><g class="edgeLabels"><g transform="translate(61.0078125, 67.75)" class="edgeLabel"><g
transform="translate(-42.3046875, -9.25)" class="label"><foreignObject height="18.5" width="84.609375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow
1</span></div></foreignObject></g></g><g transform="translate(61.0078125, 217.0390625)" class="edgeLabel"><g
transform="translate(-42.3046875, -9.25)" class="label"><foreignObject height="18.5" width="84.609375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow
2</span></div></foreignObject></g></g><g transform="translate(61.0078125, 366.328125)" class="edgeLabel"><g
transform="translate(-42.3046875, -9.25)" class="label"><foreignObject height="18.5" width="84.609375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow
3</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(61.0078125, 16.75)" id="flowchart-A-0"
```

```

class="node default default flowchart-label"><rect height="33.5" width="122.015625" y="-16.75" x="-61.0078125" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-53.5078125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="107.015625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">External Entity</span></div></foreignObject></g></g><g
transform="translate(61.0078125, 142.39453125)" id="flowchart-B-1" class="node default default flowchart-label"><circle
height="33.5" width="80.7890625" r="40.39453125" ry="0" rx="0" style=""/><g transform="translate(-32.89453125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="65.7890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process 1</span></div></foreignObject></g></g><g
transform="translate(61.0078125, 291.68359375)" id="flowchart-C-3" class="node default default flowchart-label"><circle
height="33.5" width="80.7890625" r="40.39453125" ry="0" rx="0" style=""/><g transform="translate(-32.89453125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="65.7890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process 2</span></div></foreignObject></g></g><g
transform="translate(61.0078125, 417.328125)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"
width="122.015625" y="-16.75" x="-61.0078125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-53.5078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.015625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">External
Entity</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-30.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-30.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 475.734375 1055.84375"
```

style="max-width: 475.734px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"

```
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
```

```
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
```

```
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
```

```
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
```



```
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 10
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
```

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0" d="M187.607421875,33.5L187.607421875,39.208333333333336C187.607421875,44.916666666666664,187.607421875,56.333333333333336,187.607421875,66.86666666666666C187.607421875,77.39999999999999,187.607421875,87.05,187.607421875,91.875L187.607421875,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0" d="M187.607421875,135.5L187.607421875,139.66666666666666C187.607421875,143.83333333333334,187.607421875,152.16666666666666,187.67343827547458,159.70016975753654C187.73945467594913,167.23367284840646,187.8714874768983,173.9673456968129,187.93750387737285,177.33418212101614L188.00352027784743,180.70101854521937"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0" d="M125.53986131832184,391.82306444332187L111.3613427652682,407.87599120276826C97.18282421221456,423.9289179622146,68.82578710610728,456.0347714811073,54.64726855305364,505.45879199055366C40.46875,554.8828125,40.46875,621.625,40.46875,688.3671875C40.46875,755.109375,40.46875,821.8515625,40.46875,860.0476562499999C40.46875,898.24375,40.46875,907.8937500000001,40.46875,912.71875L40.46875,917.54375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-E" id="L-C-E-0" d="M239.98326945676084,402.5147774182392L248.94569329730072,416.7857520151993C257.9081171378405,431.0567266121595,275.8329648189203,459.5986758060797,284.86601347610446,478.77807515981925C293.8990621332886,497.95747451355874,294.04031176657725,507.77432402711753,294.11093658322153,512.682748783897L294.18156139986587,517.5911735406763"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"

d="M246.17174671415012,806.7576842141501L240.49110403262512,820.3970285117917C234.8104613511001,834.0363728094
335,223.44917598805003,861.3150614047167,217.76853330652503,879.7794057023583C212.087890625,898.24375,212.087890
625,907.8937500000001,212.087890625,912.71875L212.087890625,917.54375"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-G" id="L-E-G-0"

d="M342.3438782858499,806.7576842141501L347.8578543007082,820.3970285117917C353.37183031556657,834.03637280943
35,364.39978234528326,861.3150614047167,369.9137583601416,879.7794057023583C375.427734375,898.24375,375.42773437
5,907.8937500000001,375.427734375,912.71875L375.427734375,917.54375"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-H" id="L-D-H-0"

d="M40.46875,956.34375L40.46875,960.5104166666666C40.46875,964.6770833333334,40.46875,973.0104166666666,46.257777
202215834,980.8687971004744C52.046804404431676,988.727177534282,63.62485880886336,996.1106050685639,69.41388601
107919,999.802318835705L75.20291321329503,1003.4940326028459"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-H" id="L-F-H-0"

d="M212.087890625,956.34375L212.087890625,960.5104166666666C212.087890625,964.6770833333334,212.087890625,973.01
04166666666,202.3160763542912,981.0204346709969C192.54426208358234,989.030452675327,173.00063354216468,996.7171
553506538,163.22881927145588,1000.5605066883173L153.45700500074705,1004.4038580259809"/></g><g
class="edgeLabels"><g transform="translate(187.607421875, 67.75)" class="edgeLabel"><g transform="translate(-18.59765625,
-9.25)" class="label"><foreignObject height="18.5" width="37.1953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Input</div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
transform="translate(40.46875, 688.3671875)" class="edgeLabel"><g transform="translate(-11.32421875, -9.25)"
class="label"><foreignObject height="18.5" width="22.6484375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Yes</div></foreignObject></g></g><g
transform="translate(293.7578125, 488.140625)" class="edgeLabel"><g transform="translate(-9.3984375, -9.25)"

```
class="label"><foreignObject height="18.5" width="18.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">No</span></div></foreignObject></g></g><g
transform="translate(212.087890625, 888.59375)" class="edgeLabel"><g transform="translate(-11.32421875, -9.25)"
class="label"><foreignObject height="18.5" width="22.6484375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Yes</span></div></foreignObject></g></g><g
transform="translate(375.427734375, 888.59375)" class="edgeLabel"><g transform="translate(-9.3984375, -9.25)"
class="label"><foreignObject height="18.5" width="18.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">No</span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(187.607421875, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">User</span></div></foreignObject></g></g><g
transform="translate(187.607421875, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="200.3671875" y="-16.75" x="-100.18359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-92.68359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="185.3671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">get_system_text
Function</span></div></foreignObject></g></g><g transform="translate(187.607421875, 319.6953125)" id="flowchart-C-3"
class="node default default flowchart-label"><polygon style="" transform="translate(-134.1953125,134.1953125)"
class="label-container" points="134.1953125,0 268.390625,-134.1953125 134.1953125,-268.390625 0,-134.1953125"/><g
transform="translate(-109.9453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="219.890625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">File Exists in
```

system directory?</div></foreignObject></g></g><g transform="translate(40.46875, 939.59375)" id="flowchart-D-5"

class="node default default flowchart-label"><rect height="33.5" width="80.9375" y="-16.75" x="-40.46875" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-32.96875, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"

width="65.9375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Read File</div></foreignObject></g></g><g transform="translate(293.7578125, 688.3671875)"

id="flowchart-E-7" class="node default default flowchart-label"><polygon style="" transform="translate(-165.9765625,165.9765625)"

class="label-container" points="165.9765625,0 331.953125,-165.9765625 165.9765625,-331.953125 0,-165.9765625"/><g

transform="translate(-141.7265625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="283.453125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">File Exists in

user_system_prompts_dir?</div></foreignObject></g></g><g transform="translate(212.087890625, 939.59375)"

id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="80.9375" y="-16.75" x="-40.46875" ry="0"

rx="0" style="" class="basic label-container"/><g transform="translate(-32.96875, -9.25)" style="" class="label"><rect/></foreignObject

height="18.5" width="65.9375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Read File</div></foreignObject></g></g><g transform="translate(375.427734375, 939.59375)"

id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="145.7421875" y="-16.75"

x="-72.87109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.37109375, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="130.7421875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">FileNotFoundException</div></foreignObject></g></g><g

transform="translate(105.9375, 1023.09375)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5"

width="155.5390625" y="-16.75" x="-77.76953125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-70.26953125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="140.5390625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Return File

Content</div></foreignObject></g></g></g></g></g></svg>

High_Level_Doc-31.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-31.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 485.5234375 148.2265625"
style="max-width: 485.523px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

```

```

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M64.640625,59.198524803008596L74.25,57.14265087750716C83.859375,55.08677695200573,103.078125,50.9750291010028
6,121.55493814704828,50.298316772113516C140.03175129409655,49.62160444322418,157.76662758819313,52.379927636448
34,166.6340657352414,53.75908923306043L175.50150388228968,55.138250829672515"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-A" id="L-B-A-0"

d="M180.7385406911657,76.27379005460583L170.9982630759714,77.78870525383819C161.25798546077712,79.303620453070
55,141.77743023038855,82.33345085153528,123.29156340162903,81.9772944329657C104.80569657286952,81.6211380143961
5,87.31451814573904,77.8789947787923,78.56892893217379,76.00792316099039L69.82333971860855,74.13685154318846"/><
path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-B LE-C" id="L-B-C-0"

d="M311.39815317449614,55.9777594856708L321.1898672287468,54.458679779725664C330.9815812829974,52.939600073780
53,350.56500939149873,49.90144066189026,369.1601607215225,50.53644928241038C387.7553120515463,51.17145790293049,
405.3621866030926,55.479634555860976,414.16562387886574,57.633722882326225L422.96906115463884,59.78781120879147

```

"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-C LE-B" id="L-C-B-O"

d="M428.1171875,71.1790707236842L418.4557291666667,73.5431058114035C408.7942708333333,75.90714089912281,389.471

3541666667,80.63521107456141,370.8910731057903,81.61558620946055C352.31079204491397,82.5959613443597,334.473146

5898278,79.82864143871939,325.5543238622848,78.44498148589923L316.63550113474173,77.06132153307908"/></g><g

class="edgeLabels"><g transform="translate(122.296875, 46.86328125)" class="edgeLabel"><g transform="translate(-28.296875,

-9.25)" class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Request</div></foreignObject></g></g><g

transform="translate(122.296875, 85.36328125)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"

class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Response</div></foreignObject></g></g><g

transform="translate(370.1484375, 46.86328125)" class="edgeLabel"><g transform="translate(-32.96875, -9.25)"

class="label"><foreignObject height="18.5" width="65.9375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Read File</div></foreignObject></g></g><g

transform="translate(370.1484375, 85.36328125)" class="edgeLabel"><g transform="translate(-32.09765625, -9.25)"

class="label"><foreignObject height="18.5" width="64.1953125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">File Data</div></foreignObject></g></g></g><g

class="nodes"><g transform="translate(32.3203125, 66.11328125)" id="flowchart-A-0" class="node default default

flowchart-label"><rect height="33.5" width="64.640625" y="-16.75" x="-32.3203125" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-24.8203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="49.640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Human</div></foreignObject></g></g><g transform="translate(246.06640625, 66.11328125)"

id="flowchart-B-1" class="node default default flowchart-label"><circle height="33.5" width="132.2265625" r="66.11328125" ry="0"

rx="0" style=""><g transform="translate(-58.61328125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="117.2265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">get_human_text</div></foreignObject></g></g><g transform="translate(448.8203125, 66.11328125)"


```
id="flowchart-C-5" class="node default default flowchart-label"><rect height="33.5" width="41.40625" y="-16.75" x="-20.703125"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-13.203125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="26.40625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">File</span></div></foreignObject></g></g></g></g></svg>
```

High_Level_Doc-32.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-32.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 3100.814453125 216.5"
style="max-width: 3100.81px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
```

```
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M535.25390625,20.562159706483886L449.6334635416667,26.88513308873657C364.0130208333333,33.20810647098926,192

.77213541666666,45.85405323549463,107.15169270833333,55.46035995108065C21.53125,65.06666666666666,21.53125,71.633

33333333334,21.53125,74.91666666666667L21.53125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"

d="M535.25390625,22.060907200716173L476.2236328125,28.134089333930145C417.193359375,34.20727146714412,299.13281

25,46.353635733572055,240.1025390625,55.71015120011936C181.072265625,65.06666666666666,181.072265625,71.63333333
```

333334,181.072265625,74.9166666666667L181.072265625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0" d="M535.25390625,23.516782772936608L490.7750651041667,29.347318977447173C446.2962239583333,35.17785518195774,35.7.3385416666667,46.83892759097887,312.8597005208333,55.952797128822766C268.380859375,65.06666666666666,268.380859375,71.63333333333334,268.380859375,74.9166666666667L268.380859375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0" d="M535.25390625,26.87016783601596L508.3642578125,32.1418065300133C481.474609375,37.41344522401064,427.6953125,47.956722612005315,400.8056640625,56.51169463933599C373.916015625,65.06666666666666,373.916015625,71.63333333333334,373.916015625,74.9166666666667L373.916015625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0" d="M559.8952446669161,33.5L553.1838627432635,37.666666666666664C546.4724808196107,41.833333333333336,533.0497169723054,50.166666666666664,526.3383350486528,57.6166666666667C519.626953125,65.06666666666666,519.626953125,71.63333333333334,519.626953125,74.9166666666667L519.626953125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-G" id="L-A-G-0" d="M613.8547553330839,33.5L620.5661372567365,37.666666666666664C627.2775191803893,41.833333333333336,640.7002830276946,50.166666666666664,647.4116649513472,57.6166666666667C654.123046875,65.06666666666666,654.123046875,71.63333333333334,654.123046875,74.9166666666667L654.123046875,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-H" id="L-A-H-0" d="M638.49609375,29.717301251542395L657.5927734375,34.51441770961866C676.689453125,39.31153416769493,714.8828125,48.90576708384746,733.9794921875,56.986216875257064C753.076171875,65.06666666666666,753.076171875,71.63333333333334,753.076171875,74.9166666666667L753.076171875,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-I" id="L-A-I-0" d="M638.49609375,24.594095881938966L675.6845703125,30.245079901615807C712.873046875,35.896063921292644,787.25,47.19803196064632,824.4384765625,56.1323493136565C861.626953125,65.06666666666666,861.626953125,71.63333333333334,861.626953125,74.9166666666667L861.626953125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-J" id="L-A-J-0"

d="M638.49609375,20.333056785858087L730.1412760416666,26.694213988215072C821.7864583333334,33.05537119057206,1005.0768229166666,45.77768559528602,1096.7220052083333,55.42217613097635C1188.3671875,65.06666666666666,1188.3671875,71.63333333333334,1188.3671875,74.91666666666667L1188.3671875,78.2"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-K" id="L-A-K-0"

d="M638.49609375,17.953395717755296L928.3785807291666,24.711163098129415C1218.2610677083333,31.468930478503534,1798.0260416666667,44.98446523925176,2087.9085286458335,55.02556595295922C2377.791015625,65.06666666666666,2377.791015625,71.63333333333334,2377.791015625,74.91666666666667L2377.791015625,78.2"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-L" id="L-B-L-0"

d="M21.53125,117L21.53125,121.16666666666667C21.53125,125.33333333333333,21.53125,133.66666666666666,21.53125,141.16666666666667C21.53125,148.56666666666666,21.53125,155.13333333333333,21.53125,158.41666666666666L21.53125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-M" id="L-C-M-0"

d="M160.6135385479042,117L155.52430295658684,121.16666666666667C150.43506736526948,125.33333333333333,140.25659618263475,133.66666666666666,135.16736059131736,141.16666666666667C130.078125,148.56666666666666,130.078125,155.13333333333333,130.078125,158.41666666666666L130.078125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-N" id="L-C-N-0"

d="M202.01603433757487,117L207.22592705214572,121.16666666666667C212.43581976671658,125.33333333333333,222.8556051958583,133.66666666666666,228.06549791042914,141.16666666666667C233.275390625,148.56666666666666,233.275390625,155.13333333333333,233.275390625,158.41666666666666L233.275390625,161.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-O" id="L-E-O-0"

d="M352.97224691242513,117L347.76235419785434,121.16666666666667C342.5524614832834,125.33333333333333,332.1326760541417,133.66666666666666,326.92278333957086,141.16666666666667C321.712890625,148.56666666666666,321.71289062

5,155.13333333333333,321.712890625,158.41666666666666L321.712890625,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-P" id="L-E-P-0"

d="M414.478515625,113.1681168057211L429.5670572916667,117.97343067143424C444.6555989583333,122.7787445371474,47
4.8326822916667,132.38937226857368,489.9212239583333,140.47801946762016C505.009765625,148.56666666666666,505.009
765625,155.13333333333333,505.009765625,158.41666666666666L505.009765625,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H
LE-Q" id="L-H-Q-0"

d="M753.076171875,117L753.076171875,121.16666666666667C753.076171875,125.33333333333333,753.076171875,133.666666
66666666,753.076171875,141.11666666666667C753.076171875,148.56666666666666,753.076171875,155.13333333333333,753.
076171875,158.41666666666666L753.076171875,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J LE-R" id="L-J-R-0"

d="M1127.5,109.11468900955899L1089.8668619791667,114.59557417463249C1052.2337239583333,120.07645933970599,976.9
674479166666,131.038229669853,939.3343098958334,139.80244816825984C901.701171875,148.56666666666666,901.7011718
75,155.13333333333333,901.701171875,158.41666666666666L901.701171875,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J
LE-S" id="L-J-S-0"

d="M1147.8861924588323,117L1137.8162931948602,121.16666666666667C1127.7463939308882,125.33333333333333,1107.606
595402944,133.66666666666666,1097.536696138972,141.11666666666667C1087.466796875,148.56666666666666,1087.466796
875,155.13333333333333,1087.466796875,158.41666666666666L1087.466796875,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J
LE-T" id="L-J-T-0"

d="M1228.8481825411677,117L1238.9180818051398,121.16666666666667C1248.9879810691118,125.33333333333333,1269.127
779597056,133.66666666666666,1279.197678861028,141.11666666666667C1289.267578125,148.56666666666666,1289.267578
125,155.13333333333333,1289.267578125,158.41666666666666L1289.267578125,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J

LE-U" id="L-J-U-0"

d="M1249.234375,108.85519580155953L1288.3082682291667,114.37932983463294C1327.3821614583333,119.90346386770636,1405.5299479166667,130.95173193385318,1444.6038411458333,139.7591993002599C1483.677734375,148.56666666666666,1483.677734375,155.13333333333333,1483.677734375,158.41666666666666L1483.677734375,161.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-V" id="L-K-V-0"

d="M2326.501953125,103.33049687835415L2219.1966145833335,109.77541406529512C2111.8912760416665,116.22033125223611,1897.2805989583333,129.11016562611806,1789.9752604166667,138.83841614639235C1682.669921875,148.56666666666666,1682.669921875,155.13333333333333,1682.669921875,158.41666666666666L1682.669921875,161.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-W" id="L-K-W-0"

d="M2326.501953125,104.55327901025231L2252.1165364583335,110.79439917521024C2177.7311197916665,117.03551934016821,2028.9602864583333,129.5177596700841,1954.5748697916667,139.04221316837538C1880.189453125,148.56666666666666,1880.189453125,155.13333333333333,1880.189453125,158.41666666666666L1880.189453125,161.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-X" id="L-K-X-0"

d="M2326.501953125,107.4208744849238L2285.28125,113.18406207076983C2244.060546875,118.94724965661585,2161.619140625,130.47362482830792,2120.3984375,139.5201457474873C2079.177734375,148.56666666666666,2079.177734375,155.13333333333333,2079.177734375,158.41666666666666L2079.177734375,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K LE-Y" id="L-K-Y-0"

d="M2338.9500725112275,117L2329.2881463635226,121.16666666666667C2319.626220215818,125.33333333333333,2300.3023679204093,133.66666666666666,2290.6404417727044,141.11666666666667C2280.978515625,148.56666666666666,2280.978515625,155.13333333333333,2280.978515625,158.41666666666666L2280.978515625,161.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-Z" id="L-K-Z-0"

d="M2416.6319587387725,117L2426.2938848864774,121.16666666666667C2435.955811034182,125.33333333333333,2455.2796

633295907,133.66666666666666,2464.9415894772956,141.11666666666667C2474.603515625,148.56666666666666,2474.603515625,155.13333333333333,2474.603515625,158.41666666666666L2474.603515625,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K
LE-AA" id="L-K-AA-0"
d="M2429.080078125,107.7920318368807L2467.8515625,113.49335986406724C2506.623046875,119.1946878912538,2584.1660
15625,130.5973439456269,2622.9375,139.58200530614678C2661.708984375,148.56666666666666,2661.708984375,155.133333
33333333,2661.708984375,158.41666666666666L2661.708984375,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K LE-AB" id="L-K-AB-0"
d="M2429.080078125,104.9344369813965L2496.7174479166665,111.11203081783042C2564.3548177083335,117.289624654264
34,2699.6295572916665,129.64481232713217,2767.2669270833335,139.10573949689942C2834.904296875,148.56666666666666
6,2834.904296875,155.13333333333333,2834.904296875,158.41666666666666L2834.904296875,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K
LE-AC" id="L-K-AC-0"
d="M2429.080078125,103.61956388111996L2526.4466145833335,110.01630323426663C2623.8131510416665,116.41304258741
332,2818.5462239583335,129.20652129370666,2915.9127604166665,138.88659398018663C3013.279296875,148.56666666666666
66,3013.279296875,155.13333333333333,3013.279296875,158.41666666666666L3013.279296875,161.7"/></g><g
class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

[illegible]

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
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transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g
transform="translate(586.875, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="103.2421875" y="-16.75" x="-51.62109375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-44.12109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="88.2421875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">interface.py</div></foreignObject></g></g><g transform="translate(21.53125, 100.25)" id="flowchart-B-1"

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class="node default default flowchart-label"><rect height="33.5" width="40.2421875" y="-16.75" x="-20.12109375" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-12.62109375, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="25.2421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">abc</span></div></foreignObject></g></g><g
transform="translate(181.072265625, 100.25)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"
width="44.671875" y="-16.75" x="-22.3359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-14.8359375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="29.671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">json</span></div></foreignObject></g></g><g transform="translate(268.380859375, 100.25)" id="flowchart-D-5"
class="node default default flowchart-label"><rect height="33.5" width="29.9453125" y="-16.75" x="-14.97265625" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-7.47265625, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="14.9453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">re</span></div></foreignObject></g></g><g
transform="translate(373.916015625, 100.25)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"
width="81.125" y="-16.75" x="-40.5625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-33.0625,
-9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="66.125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">colorama</span></div></foreignObject></g></g><g
transform="translate(519.626953125, 100.25)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5"
width="110.296875" y="-16.75" x="-55.1484375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-47.6484375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="95.296875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">memgpt.utils</span></div></foreignObject></g></g><g transform="translate(654.123046875, 100.25)"
id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="58.6953125" y="-16.75"
x="-29.34765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-21.84765625, -9.25)" style=""
class="label"><rect/></foreignObject height="18.5" width="43.6953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">printd</span></div></foreignObject></g></g><g
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transform="translate(753.076171875, 100.25)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5" width="39.2109375" y="-16.75" x="-19.60546875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-12.10546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="24.2109375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">init</div></foreignObject></g></g><g transform="translate(861.626953125, 100.25)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5" width="77.890625" y="-16.75" x="-38.9453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-31.4453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="62.890625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">STRIP_UI</div></foreignObject></g></g><g transform="translate(1188.3671875, 100.25)" id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="121.734375" y="-16.75" x="-60.8671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.3671875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="106.734375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">AgentInterface</div></foreignObject></g></g><g transform="translate(2377.791015625, 100.25)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="33.5" width="102.578125" y="-16.75" x="-51.2890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-43.7890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="87.578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">CLIInterface</div></foreignObject></g></g><g transform="translate(21.53125, 183.75)" id="flowchart-L-21" class="node default default flowchart-label"><rect height="33.5" width="43.0625" y="-16.75" x="-21.53125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-14.03125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="28.0625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">ABC</div></foreignObject></g></g><g transform="translate(130.078125, 183.75)" id="flowchart-M-23" class="node default default flowchart-label"><rect height="33.5" width="74.03125" y="-16.75" x="-37.015625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-29.515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="59.03125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">abstract</div></foreignObject></g></g><g transform="translate(233.275390625, 183.75)"

id="flowchart-N-25" class="node default default flowchart-label"><rect height="33.5" width="29.9453125" y="-16.75"

x="-14.97265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-7.47265625, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="14.9453125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">re</div></foreignObject></g></g><g

transform="translate(321.712890625, 183.75)" id="flowchart-O-27" class="node default default flowchart-label"><rect height="33.5"

width="46.9296875" y="-16.75" x="-23.46484375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-15.96484375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="31.9296875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Fore</div></foreignObject></g></g><g transform="translate(505.009765625, 183.75)"

id="flowchart-P-29" class="node default default flowchart-label"><rect height="33.5" width="50.375" y="-16.75" x="-25.1875" ry="0"

rx="0" style="" class="basic label-container"/><g transform="translate(-17.6875, -9.25)" style="" class="label"><rect/></foreignObject

height="18.5" width="35.375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Style</div></foreignObject></g></g><g transform="translate(753.076171875, 183.75)"

id="flowchart-Q-31" class="node default default flowchart-label"><rect height="33.5" width="83.5703125" y="-16.75"

x="-41.78515625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-34.28515625, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="68.5703125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">autoreset</div></foreignObject></g></g><g

transform="translate(901.701171875, 183.75)" id="flowchart-R-33" class="node default default flowchart-label"><rect height="33.5"

width="113.6796875" y="-16.75" x="-56.83984375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-49.33984375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="98.6796875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">user_message</div></foreignObject></g></g><g transform="translate(1087.466796875, 183.75)"

id="flowchart-S-35" class="node default default flowchart-label"><rect height="33.5" width="157.8515625" y="-16.75"

x="-78.92578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-71.42578125, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="142.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">internal_monologue</div></foreignObject></g></g><g
transform="translate(1289.267578125, 183.75)" id="flowchart-T-37" class="node default default flowchart-label"><rect height="33.5"
width="145.75" y="-16.75" x="-72.875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.375, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="130.75"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">assistant_message</div></foreignObject></g></g><g
transform="translate(1483.677734375, 183.75)" id="flowchart-U-39" class="node default default flowchart-label"><rect height="33.5"
width="143.0703125" y="-16.75" x="-71.53515625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.03515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.0703125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">function_message</div></foreignObject></g></g><g transform="translate(1682.669921875, 183.75)"
id="flowchart-V-41" class="node default default flowchart-label"><rect height="33.5" width="154.9140625" y="-16.75"
x="-77.45703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.95703125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="139.9140625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">important_message</div></foreignObject></g></g><g
transform="translate(1880.189453125, 183.75)" id="flowchart-W-43" class="node default default flowchart-label"><rect height="33.5"
width="140.125" y="-16.75" x="-70.0625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-62.5625,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="125.125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">warning_message</div></foreignObject></g></g><g transform="translate(2079.177734375, 183.75)"
id="flowchart-X-45" class="node default default flowchart-label"><rect height="33.5" width="157.8515625" y="-16.75"
x="-78.92578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-71.42578125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="142.8515625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">internal_monologue</div></foreignObject></g></g><g
transform="translate(2280.978515625, 183.75)" id="flowchart-Y-47" class="node default default flowchart-label"><rect height="33.5"
width="145.75" y="-16.75" x="-72.875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.375, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="130.75"><div style="display: inline-block; white-space: nowrap;"

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xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">assistant_message</span></div></foreignObject></g></g><g
transform="translate(2474.603515625, 183.75)" id="flowchart-Z-49" class="node default default flowchart-label"><rect height="33.5"
width="141.5" y="-16.75" x="-70.75" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-63.25, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="126.5"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">memory_message</span></div></foreignObject></g></g><g
transform="translate(2661.708984375, 183.75)" id="flowchart-AA-51" class="node default default flowchart-label"><rect height="33.5"
width="132.7109375" y="-16.75" x="-66.35546875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-58.85546875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="117.7109375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">system_message</span></div></foreignObject></g></g><g transform="translate(2834.904296875, 183.75)"
id="flowchart-AB-53" class="node default default flowchart-label"><rect height="33.5" width="113.6796875" y="-16.75"
x="-56.83984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-49.33984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="98.6796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">user_message</span></div></foreignObject></g></g><g
transform="translate(3013.279296875, 183.75)" id="flowchart-AC-55" class="node default default flowchart-label"><rect height="33.5"
width="143.0703125" y="-16.75" x="-71.53515625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.03515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.0703125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">function_message</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-33.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-33.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 907.9609375 566.1875"
```

```
style="max-width: 907.961px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
```

```
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
```

```
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
```

```
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
```

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"><g class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0" d="M429.44921875,33.5L429.44921875,37.666666666666664C429.44921875,41.833333333333336,429.44921875,50.166666666666664,429.44921875,57.616666666666667C429.44921875,65.066666666666666,429.44921875,71.633333333333334,429.44921875,74.916666666666667L429.44921875,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0" d="M429.44921875,117L429.44921875,121.16666666666667C429.44921875,125.33333333333333,429.44921875,133.66666666666666,429.51523515047455,141.20016975753654C429.58125155094916,148.73367284840646,429.71328435189827,155.4673456968129,429.7793007523728,158.83418212101614L429.84531715284743,162.20101854521937"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0" d="M358.5735316007112,293.8118128507112L312.7455211255927,311.332760708926C266.9175106504741,328.8537085671408,175.2614897002371,363.89560428357044,129.43347922511853,386.2415521417852C83.60546875,408.58750000000003,83.60546875,418.2375,83.60546875,423.0625L83.60546875,427.8875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-E" id="L-C-E-0" d="M383.22333269094617,318.46161394094617L371.04027724245515,331.87426161745515C358.8572217939641,345.2869092939641,334.49111089698204,372.11220464698204,322.308055448491,390.349852323491C310.125,408.58750000000003,310.125,418.2375,310.125,423.0625L310.125,427.8875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-F" id="L-C-F-0"

d="M476.67510480905383,318.46161394094617L488.6914935908782,331.87426161745515C500.7078823727026,345.286909293
9641,524.7406599363513,372.11220464698204,536.7570487181756,390.349852323491C548.7734375,408.58750000000003,548.
7734375,418.2375,548.7734375,423.0625L548.7734375,427.8875"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-G" id="L-C-G-0"

d="M502.3167283902544,292.8199903597456L550.803002825212,310.50624196645464C599.2892772601696,328.192493573163
74,696.2618261300848,363.56499678658184,744.7481005650425,386.0762483932909C793.234375,408.58750000000003,793.23
4375,418.2375,793.234375,423.0625L793.234375,427.8875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-H" id="L-D-H-0"

d="M83.60546875,466.6875L83.60546875,470.8541666666667C83.60546875,475.0208333333333,83.60546875,483.35416666666
67,83.60546875,490.8041666666666C83.60546875,498.2541666666666,83.60546875,504.8208333333334,83.60546875,508.104
1666666667L83.60546875,511.3875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-I" id="L-E-I-0"

d="M310.125,466.6875L310.125,470.8541666666667C310.125,475.0208333333333,310.125,483.3541666666667,310.125,490.804
1666666666C310.125,498.2541666666666,310.125,504.8208333333334,310.125,508.1041666666667L310.125,511.3875"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-J" id="L-F-J-0"

d="M548.7734375,466.6875L548.7734375,470.8541666666667C548.7734375,475.0208333333333,548.7734375,483.35416666666
67,548.7734375,490.8041666666666C548.7734375,498.2541666666666,548.7734375,504.8208333333334,548.7734375,508.104
1666666667L548.7734375,511.3875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-K" id="L-G-K-0"

d="M793.234375,466.6875L793.234375,470.8541666666667C793.234375,475.0208333333333,793.234375,483.3541666666667,79
3.234375,490.8041666666666C793.234375,498.2541666666666,793.234375,504.8208333333334,793.234375,508.1041666666666
7L793.234375,511.3875"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)"
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

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xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
transform="translate(83.60546875, 398.9375)" class="edgeLabel"><g transform="translate(-47.40625, -9.25)"
class="label"><foreignObject height="18.5" width="94.8125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">User Message</span></div></foreignObject></g></g><g
transform="translate(310.125, 398.9375)" class="edgeLabel"><g transform="translate(-56.71484375, -9.25)"
class="label"><foreignObject height="18.5" width="113.4296875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">System Message</span></div></foreignObject></g></g><g
transform="translate(548.7734375, 398.9375)" class="edgeLabel"><g transform="translate(-59.53515625, -9.25)"
class="label"><foreignObject height="18.5" width="119.0703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Memory Message</span></div></foreignObject></g></g><g
transform="translate(793.234375, 398.9375)" class="edgeLabel"><g transform="translate(-62.52734375, -9.25)"
class="label"><foreignObject height="18.5" width="125.0546875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Function Message</span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(429.44921875, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="109.8125" y="-16.75" x="-54.90625" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-47.40625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="94.8125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User Message</span></div></foreignObject></g></g><g transform="translate(429.44921875, 100.25)"
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id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="141.8515625" y="-16.75"
x="-70.92578125" ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-63.42578125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="126.8515625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">AutoGenInterface</span></div></foreignObject></g></g><g
transform="translate(429.44921875, 265.84375)" id="flowchart-C-3" class="node default default flowchart-label"><polygon style=""
transform="translate(-98.84375,98.84375)" class="label-container" points="98.84375,0 197.6875,-98.84375 98.84375,-197.6875
0,-98.84375"/><g transform="translate(-74.59375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="149.1875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Decide Message Type</span></div></foreignObject></g></g><g transform="translate(83.60546875, 449.9375)"
id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="141.28125" y="-16.75" x="-70.640625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-63.140625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="126.28125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Assistant Message</span></div></foreignObject></g></g><g
transform="translate(310.125, 449.9375)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"
width="128.4296875" y="-16.75" x="-64.21484375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-56.71484375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="113.4296875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">System
Message</span></div></foreignObject></g></g><g transform="translate(548.7734375, 449.9375)" id="flowchart-F-9" class="node
default default flowchart-label"><rect height="33.5" width="134.0703125" y="-16.75" x="-67.03515625" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-59.53515625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="119.0703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Memory Message</span></div></foreignObject></g></g><g
transform="translate(793.234375, 449.9375)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5"
width="140.0546875" y="-16.75" x="-70.02734375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-62.52734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="125.0546875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Function

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Message</span></div></foreignObject></g></g><g transform="translate(83.60546875, 533.4375)" id="flowchart-H-13" class="node
default default flowchart-label"><rect height="33.5" width="167.2109375" y="-16.75" x="-83.60546875" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-76.10546875, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="152.2109375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process User Message</span></div></foreignObject></g></g><g
transform="translate(310.125, 533.4375)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5"
width="185.828125" y="-16.75" x="-92.9140625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-85.4140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="170.828125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process System
Message</span></div></foreignObject></g></g><g transform="translate(548.7734375, 533.4375)" id="flowchart-J-17" class="node
default default flowchart-label"><rect height="33.5" width="191.46875" y="-16.75" x="-95.734375" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-88.234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="176.46875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Process Memory Message</span></div></foreignObject></g></g><g transform="translate(793.234375,
533.4375)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="33.5" width="197.453125" y="-16.75"
x="-98.7265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-91.2265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="182.453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process Function
Message</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-34.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-34.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 373.40625 467" style="max-width:
373.406px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg

```

```
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}/></style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
```

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M66.04815681137724,208.75L78.96851609281437,176.75C91.88887537425148,144.75,117.72959393712574,80.75,141.55307

821856286,48.75C165.3765625,16.75,187.18281249999998,16.75,198.0859375,16.75L208.9890625,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A

LE-C" id="L-A-C-0"

d="M70.55682385229541,208.75L82.72573862691284,190.66666666666666C94.89465340153026,172.58333333333334,119.2324

8295076513,136.41666666666666,138.5089498087159,118.33333333333333C157.78541666666666,100.25,172.00052083333333,

100.25,179.10807291666666,100.25L186.215625,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"

d="M93.10015905688623,208.75L101.5118512974052,204.58333333333334C109.92354353792416,200.41666666666666,126.746

92801896208,192.08333333333334,139.09690150948106,187.91666666666666C151.446875,183.75,159.32343749999998,183.75,

163.26171875,183.75L167.2,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0"

d="M93.10015905688623,242.25L101.5118512974052,246.41666666666666C109.92354353792416,250.58333333333334,126.746

92801896208,258.91666666666667,142.10536505114771,263.08333333333333C157.46380208333332,267.25,171.35729166666667,

267.25,178.30403645833334,267.25L185.25078125,267.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0"

d="M70.55682385229541,242.25L82.72573862691284,260.33333333333333C94.89465340153026,278.41666666666667,119.232482

95076513,314.58333333333333,134.6847310587159,332.66666666666667C150.13697916666666,350.75,156.70364583333333,350.

75,159.98697916666666,350.75L163.2703125,350.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-G" id="L-A-G-0"
d="M66.04815681137724,242.25L78.96851609281437,274.25C91.88887537425148,306.25,117.72959393712574,370.25,142.0381
0426022952,402.25C166.34661458333332,434.25,189.12291666666667,434.25,200.51106770833334,434.25L211.89921875,434.2
5"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0"
width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g
transform="translate(59.28515625, 225.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="118.5703125" y="-16.75" x="-59.28515625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-51.78515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="103.5703125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">json_parser.py</div></foreignObject></g></g><g transform="translate(262.98828125, 16.75)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="97.3984375" y="-16.75" x="-48.69921875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-41.19921875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="82.3984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">import json</div></foreignObject></g></g></g>

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-35.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -57.125 1759.765625 228" style="max-width: 1759.77px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
```

```
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M144.2541729763216,49.375L165.20790456360132,65.5C186.16163615088104,81.625,228.06909932544053,113.875,252.306
1642460536,130C276.54322916666666,146.125,283.10989583333333,146.125,286.3932291666667,146.125L289.6765625,146.125"
/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-A LE-C" id="L-A-C-0"
d="M162.49522393724698,49.375L180.40878036437246,56.875C198.32233679149797,64.375,234.14944964574897,79.375,270.0
421727395412,86.875C305.93489583333333,94.375,341.8932291666667,94.375,377.8515625,94.375C413.80989583333333,94.375,
449.7682291666667,94.375,473.2594461374635,95.69074130502912C496.7506631082603,97.00648261005824,507.77476371652
057,99.63796522011648,513.2868140206507,100.9537065251456L518.7988643247809,102.26944783017473"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-D" id="L-A-D-0"
d="M217.96378698671498,49.375L226.6325829055958,50.89583333333333C235.30137882447664,52.416666666666664,252.63
89706622383,55.458333333333336,279.28693324778584,56.979166666666664C305.93489583333333,58.5,341.8932291666667,58
```

.5,377.8515625,58.5C413.8098958333333,58.5,449.7682291666667,58.5,485.8138020833333,58.5C521.859375,58.5,557.9921875
,58.5,594.125,58.5C630.2578125,58.5,666.390625,58.5,691.7117177411186,61.36321618970491C717.0328104822371,64.226432
37940981,731.5421834644743,69.95286475881962,738.796869955593,72.81608094852453L746.0515564467115,75.6792971382
2943"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-A LE-E" id="L-A-E-0"

d="M244.9765625,24.320049924517306L249.14322916666666,24.037541603764424C253.30989583333334,23.75503328301154,2
61.6432291666667,23.190016641505768,283.7890625,22.907508320752886C305.9348958333333,22.625,341.8932291666667,22.
625,377.8515625,22.625C413.8098958333333,22.625,449.7682291666667,22.625,485.8138020833333,22.625C521.859375,22.62
5,557.9921875,22.625,594.125,22.625C630.2578125,22.625,666.390625,22.625,699.6067708333334,22.625C732.8229166666666,
22.625,763.1223958333334,22.625,793.421875,22.625C823.7213541666666,22.625,854.0208333333334,22.625,879.03709619569
2,27.113396707037293C904.0533590580508,31.601793414074578,923.7864056161017,40.578586828149156,933.652928895127,
45.066983535186445L943.5194521741525,49.555380242223734"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0"

d="M176.3395883004087,15.875L191.94575066700725,11.020833333333334C207.5519130336058,6.166666666666667,238.7642
377668029,-3.541666666666665,272.3495668000681,-8.395833333333334C305.9348958333333,-13.25,341.8932291666667,-13.
25,377.8515625,-13.25C413.8098958333333,-13.25,449.7682291666667,-13.25,485.8138020833333,-13.25C521.859375,-13.25,55
7.9921875,-13.25,594.125,-13.25C630.2578125,-13.25,666.390625,-13.25,699.6067708333334,-13.25C732.8229166666666,-13.25,
763.1223958333334,-13.25,793.421875,-13.25C823.7213541666666,-13.25,854.0208333333334,-13.25,885.9778645833334,-13.25
C917.9348958333334,-13.25,951.5494791666666,-13.25,985.1640625,-13.25C1018.7786458333334,-13.25,1052.3932291666667,-
13.25,1078.7376998589646,-7.202218434072357C1105.0821705512626,-1.154436868144714,1124.156528602525,10.9411262637
10572,1133.6937076281563,16.988907829638215L1143.2308866537876,23.03668939556586"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-G" id="L-A-G-0"

d="M152.70759269877675,15.875L172.25242099898063,5.041666666666667C191.7972492991845,-5.791666666666667,230.886
90589959228,-27.458333333333332,268.4109008664628,-38.291666666666664C305.9348958333333,-49.125,341.893229166666
7,-49.125,377.8515625,-49.125C413.8098958333333,-49.125,449.7682291666667,-49.125,485.8138020833333,-49.125C521.8593

75,-49.125,557.9921875,-49.125,594.125,-49.125C630.2578125,-49.125,666.390625,-49.125,699.60677083333334,-49.125C732.822
9166666666,-49.125,763.12239583333334,-49.125,793.421875,-49.125C823.7213541666666,-49.125,854.02083333333334,-49.125,8
85.97786458333334,-49.125C917.93489583333334,-49.125,951.5494791666666,-49.125,985.1640625,-49.125C1018.77864583333334
, -49.125,1052.3932291666667,-49.125,1083.8860677083333,-49.125C1115.37890625,-49.125,1144.75,-49.125,1174.12109375,-49.
125C1203.4921875,-49.125,1232.86328125,-49.125,1256.8397409993422,-41.4979759668545C1280.8162007486847,-33.8709519
3370899,1299.398026497369,-18.61690386741798,1308.6889393717113,-10.989879834272477L1317.9798522460537,-3.3628558
011269725"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-C" id="L-B-C-0"

d="M460.7265625,146.125L464.8932291666667,146.125C469.0598958333333,146.125,477.3932291666667,146.125,487.0719461
374635,144.80925869497088C496.7506631082603,143.49351738994176,507.77476371652057,140.86203477988352,513.286814
0206507,139.5462934748544L518.7988643247809,138.23055216982527"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M677.5234375,120.25L681.6901041666666,120.25C685.8567708333333,120.25,694.1901041666666,120.25,702.84984990078
77,118.97100748849084C711.5095956349088,117.69201497698168,720.4957537698177,115.13402995396336,724.98883283727
21,113.8550374424542L729.4819119047265,112.57604493094503"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"

d="M859.3203125,94.375L863.4869791666666,94.375C867.6536458333333,94.375,875.9869791666666,94.375,885.22523788654
4,93.07370523084649C894.4634966064214,91.77241046169297,904.6066807128426,89.16982092338593,909.6782727660533,87
.86852615423241L914.7498648192638,86.56723138507888"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"

d="M1061.0078125,68.5L1065.1744791666667,68.5C1069.3411458333333,68.5,1077.6744791666667,68.5,1086.172561458856,67
.22805350430183C1094.6706437510456,65.95610700860367,1103.3334750020915,63.41221401720734,1107.6648906276143,62.
14026752150917L1111.9963062531372,60.86832102581101"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-G" id="L-F-G-0"

d="M1237.234375,42.625L1241.4010416666667,42.625C1245.5677083333333,42.625,1253.9010416666667,42.625,1261.9435570
676553,41.37524962195646C1269.986072468644,40.12549924391293,1277.7377699372876,37.62599848782585,1281.61361867

```
<path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-H" id="L-G-H-0"  
  
d="M1397.7265625,16.75L1401.8932291666667,16.75C1406.0598958333333,16.75,1414.3932291666667,16.75,1421.8432291666  
668,16.75C1429.2932291666666,16.75,1435.8598958333332,16.75,1439.1432291666667,16.75L1442.4265625,16.75"/></path>  
  
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H  
LE-I" id="L-H-I-0"  
  
d="M1582.8359375,16.75L1587.0026041666667,16.75C1591.1692708333333,16.75,1599.5026041666667,16.75,1606.9526041666  
668,16.75C1614.4026041666666,16.75,1620.9692708333332,16.75,1624.2526041666667,16.75L1627.5359375,16.75"/></g><g>  
  
class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
  
class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"  
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g  
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
```

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g transform="translate(122.48828125, 32.625)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="244.9765625" y="-16.75" x="-122.48828125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-114.98828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="229.9765625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">get_webui_completion Function</div></foreignObject></g></g><g transform="translate(377.8515625, 146.125)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="165.75" y="-16.75" x="-82.875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-75.375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="150.75"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Count Prompt Tokens</div></foreignObject></g></g><g transform="translate(594.125, 120.25)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="166.796875" y="-16.75" x="-83.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-75.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="151.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Check Prompt Tokens</div></foreignObject></g></g><g transform="translate(793.421875, 94.375)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="131.796875" y="-16.75" x="-65.8984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-58.3984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="116.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-36.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 749.53125 93.75" style="max-width:
749.531px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
```



```
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,33.58813626027637L54.063151041666664,30.781780216896976C61.329427083333336,27.97542417351758,75.8
6197916666667,22.36271208675879,89.51119791666667,19.556356043379395C103.16041666666666,16.75,115.9263020833333
3,16.75,122.30924479166667,16.75L128.6921875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"
d="M281.4609375,16.75L290.0091145833333,16.75C298.5572916666667,16.75,315.6536458333333,16.75,331.8666666666667,16
.75C348.07968750000003,16.75,363.409375,16.75,371.07421875,16.75L378.7390625,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"
d="M489.7578125,16.75L498.080078125,16.75C506.40234375,16.75,523.046875,16.75,538.8273285782461,18.333278434839684
C554.6077821564924,19.916556869679365,569.5241580629846,23.083113739358733,576.9823460162307,24.666392174198418
L584.440533969477,26.2496706090381"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-A" id="L-D-A-0"
d="M589.625,57.89973319873089L581.302734375,59.666444332275745C572.98046875,61.4331554658206,556.3359375,64.9665
```

777329103,530.8815104166666,66.73328886645514C505.4270833333333,68.5,471.1627604166667,68.5,436.6725260416667,68.5C402.1822916666667,68.5,367.4661458333333,68.5,329.2708333333333,68.5C291.0755208333333,68.5,249.4010416666666,68.5,209.00846354166666,68.5C168.61588541666666,68.5,129.5052083333333,68.5,103.50760617475684,66.01189119011075C77.51000401618036,63.52378238022148,64.6254767823607,58.54756476044296,58.18321316545089,56.059455950553705L51.74094954854106,53.57134714066445"/></g><g class="edgeLabels"><g transform="translate(90.39453125, 16.75)" class="edgeLabel"><g transform="translate(-18.59765625, -9.25)" class="label"><foreignObject height="18.5" width="37.1953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Input</div></foreignObject></g></g><g transform="translate(332.75, 16.75)" class="edgeLabel"><g transform="translate(-26.2890625, -9.25)" class="label"><foreignObject height="18.5" width="52.578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Process</div></foreignObject></g></g><g transform="translate(539.69140625, 16.75)" class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Output</div></foreignObject></g></g><g transform="translate(332.75, 68.5)" class="edgeLabel"><g transform="translate(-23.71875, -9.25)" class="label"><foreignObject height="18.5" width="47.4375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Return</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(23.3984375, 42.625)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g transform="translate(207.7265625, 16.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="147.46875" y="-16.75" x="-73.734375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-66.234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="132.46875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">legacy_settings.py</div></foreignObject></g></g><g transform="translate(436.8984375, 16.75)"

```

id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="105.71875" y="-16.75" x="-52.859375"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-45.359375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="90.71875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">constants.py</span></div></foreignObject></g></g><g
transform="translate(661.578125, 42.625)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"
width="143.90625" y="-16.75" x="-71.953125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.90625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LLM_MAX_TOKENS</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-37.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-37.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 512.5390625 458" style="max-width:
512.539px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

```

```
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M104.2869272063164,204.25L131.83350704693035,171.75C159.38008688754428,139.25,214.4732465687721,74.25,260.9927
4650336343,67.1484306923081C307.5122464379547,60.04686138461619,345.45808662590935,110.84372276923239,364.43100
```

671988674,136.24215346154048L383.4039268138641,161.64058415384858"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-1"

d="M107.44183464105339,204.25L134.46259657587782,178.16666666666666C161.48335851070226,152.08333333333334,215.5
2488238035116,99.91666666666667,260.5826353442555,93.58876935155212C305.6403883081598,87.26087203643756,341.714
3703663196,126.77174407287514,359.7513613953995,146.52718009109392L377.7883524244794,166.2826161093127"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-2"

d="M112.3995463242115,204.25L138.59402297850957,184.58333333333334C164.78849963280766,164.91666666666666,217.17
745294140386,125.58333333333333,260.33487635945767,120.3670497249597C303.4922997775115,115.15076611658607,337.4
1819330502295,144.05153223317214,354.3811400687787,158.50191529146517L371.34408683253446,172.95229834975822"/><

path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-A LE-B" id="L-A-B-3"

d="M121.32342735389611,204.25L146.03059050324677,191C170.73775365259743,177.75,220.1520799512987,151.25,260.67318
73187798,147.62255113188954C301.19429468626095,143.99510226377905,332.82218312252184,163.24020452755812,348.636
1273406523,172.86275565944766L364.4500715587828,182.4853067913372"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-4"

d="M142.14581642316017,204.25L163.38258139430013,197.41666666666666C184.61934636544012,190.58333333333334,227.0
9287630772005,176.91666666666666,263.0930043824881,175.47330617187822C299.09313245725616,174.0299456770898,328.
61985866451226,184.80989135417963,343.38322176814034,190.1998641927245L358.1465848717684,195.58983703126944"/><

path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-A LE-B" id="L-A-B-5"

d="M180.1796875,211.33729269142037L195.07747395833334,209.73941057618364C209.97526041666666,208.14152846094692,
239.77083333333334,204.94576423047343,268.773513686445,205.06440597342478C297.77619403955674,205.18304771637614
,325.9859818291134,208.6160954327523,340.09087572389177,210.33261929094036L354.19576961867017,212.0491431491284

4"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-A LE-B" id="L-A-B-6"
d="M180.1796875,230.66270730857963L195.07747395833334,232.26058942381636C209.97526041666666,233.85847153905308,
239.77083333333334,237.05423576952657,268.773513686445,236.93559402657522C297.77619403955674,236.81695228362386
,325.9859818291134,233.3839045672477,340.09087572389177,231.66738070905964L354.19576961867017,229.9508568508715
6"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-A LE-B" id="L-A-B-7"
d="M142.14581642316017,237.75L163.38258139430013,244.58333333333334C184.61934636544012,251.41666666666666,227.0
9287630772005,265.08333333333333,263.0930043824881,266.5266938281218C299.09313245725616,267.9700543229102,328.61
985866451226,257.1901086458204,343.38322176814034,251.8001358072755L358.1465848717684,246.41016296873056"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-8"
d="M121.32342735389611,237.75L146.03059050324677,251C170.73775365259743,264.25,220.1520799512987,290.75,260.67318
73187798,294.37744886811043C301.19429468626095,298.0048977362209,332.82218312252184,278.7597954724419,348.63612
73406523,269.13724434055234L364.4500715587828,259.51469320866283"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-9"
d="M112.3995463242115,237.75L138.59402297850957,257.4166666666667C164.78849963280766,277.08333333333333,217.1774
5294140386,316.4166666666667,260.33487635945767,321.6329502750403C303.4922997775115,326.84923388341394,337.4181
9330502295,297.94846776682783,354.3811400687787,283.4980847085348L371.34408683253446,269.0477016502418"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-B" id="L-A-B-10"
d="M107.44183464105339,237.75L134.46259657587782,263.8333333333333C161.48335851070226,289.9166666666667,215.524
88238035116,342.0833333333333,260.5826353442555,348.4112306484479C305.6403883081598,354.7391279635624,341.71437
03663196,315.22825592712485,359.7513613953995,295.47281990890605L377.7883524244794,275.71738389068724"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-A" id="L-B-A-0"

d="M386.575799782735,276.1133327252804L367.0742341939458,302.2194439377336C347.57266860515665,328.325555150186
9,308.5695374275783,380.53777757509346,262.09253692731966,374.8177368770227C215.615536427061,369.0976961789518,1
61.664666604122,305.44539235790376,134.6892316926525,273.6192404473797L107.71379678118302,241.79308853685563"/><
/g><g class="edgeLabels"><g transform="translate(269.56640625, 9.25)" class="edgeLabel"><g transform="translate(-38.03515625,
-9.25)" class="label"><foreignObject height="18.5" width="76.0703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">add_nodes</div></foreignObject></g></g><g
transform="translate(269.56640625, 47.75)" class="edgeLabel"><g transform="translate(-36.46875, -9.25)"
class="label"><foreignObject height="18.5" width="72.9375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get_nodes</div></foreignObject></g></g><g
transform="translate(269.56640625, 86.25)" class="edgeLabel"><g transform="translate(-24.66796875, -9.25)"
class="label"><foreignObject height="18.5" width="49.3359375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get_all</div></foreignObject></g></g><g
transform="translate(269.56640625, 124.75)" class="edgeLabel"><g transform="translate(-64.38671875, -9.25)"
class="label"><foreignObject height="18.5" width="128.7734375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get_all_paginated</div></foreignObject></g></g><g
transform="translate(269.56640625, 163.25)" class="edgeLabel"><g transform="translate(-11.55078125, -9.25)"
class="label"><foreignObject height="18.5" width="23.1015625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get</div></foreignObject></g></g><g
transform="translate(269.56640625, 201.75)" class="edgeLabel"><g transform="translate(-20.53515625, -9.25)"
class="label"><foreignObject height="18.5" width="41.0703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">insert</div></foreignObject></g></g><g
transform="translate(269.56640625, 240.25)" class="edgeLabel"><g transform="translate(-43.890625, -9.25)"
class="label"><foreignObject height="18.5" width="87.78125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">insert_many</div></foreignObject></g></g><g
transform="translate(269.56640625, 278.75)" class="edgeLabel"><g transform="translate(-20.24609375, -9.25)"
class="label"><foreignObject height="18.5" width="40.4921875"><div style="display: inline-block; white-space: nowrap;"

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xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">query</span></div></foreignObject></g></g><g
transform="translate(269.56640625, 317.25)" class="edgeLabel"><g transform="translate(-15.72265625, -9.25)"
class="label"><foreignObject height="18.5" width="31.4453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">save</span></div></foreignObject></g></g><g
transform="translate(269.56640625, 355.75)" class="edgeLabel"><g transform="translate(-59.609375, -9.25)"
class="label"><foreignObject height="18.5" width="119.21875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">list_loaded_data</span></div></foreignObject></g></g><g
transform="translate(269.56640625, 394.25)" class="edgeLabel"><g transform="translate(-13.6796875, -9.25)"
class="label"><foreignObject height="18.5" width="27.359375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">size</span></div></foreignObject></g></g><g
transform="translate(269.56640625, 432.75)" class="edgeLabel"><g transform="translate(-20.72265625, -9.25)"
class="label"><foreignObject height="18.5" width="41.4453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">nodes</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(90.08984375, 221)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="180.1796875" y="-16.75" x="-90.08984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-82.58984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="165.1796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LocalStorageConnector</span></div></foreignObject></g></g><g transform="translate(427.74609375, 221)"
id="flowchart-B-1" class="node default default flowchart-label"><circle height="33.5" width="137.5859375" r="68.79296875" ry="0"
rx="0" style=""/><g transform="translate(-61.29296875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="122.5859375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">VectorStoreIndex</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-38.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-38.svg):

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 138.015625 450.078125"


```

style="max-width: 138.016px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"

xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

```

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markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M61.0078125,33.5L61.0078125,39.208333333333336C61.0078125,44.916666666666664,61.0078125,56.333333333333336,61.

0078125,66.866666666666666C61.0078125,77.39999999999999,61.0078125,87.05,61.0078125,91.875L61.0078125,96.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-C" id="L-B-C-0"

d="M61.0078125,182.7890625L61.0078125,188.49739583333334C61.0078125,194.20572916666666,61.0078125,205.6223958333

3334,61.0078125,216.15572916666667C61.0078125,226.6890625,61.0078125,236.33906249999998,61.0078125,241.1640625L61.

0078125,245.9890625"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M61.0078125,332.078125L61.0078125,337.78645833333333C61.0078125,343.49479166666667,61.0078125,354.91145833333333,

61.0078125,365.44479166666666C61.0078125,375.97812500000003,61.0078125,385.628125,61.0078125,390.453125L61.0078125,

395.278125"/></g><g class="edgeLabels"><g transform="translate(61.0078125, 67.75)" class="edgeLabel"><g

transform="translate(-42.3046875, -9.25)" class="label"><foreignObject height="18.5" width="84.609375"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Data Flow

1</span></div></foreignObject></g></g><g transform="translate(61.0078125, 217.0390625)" class="edgeLabel"><g

```



```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 130.2734375 253.5" style="max-width:
130.273px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

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markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M57.13671875,33.5L57.13671875,39.208333333333336C57.13671875,44.916666666666664,57.13671875,56.333333333333333

6,57.13671875,66.866666666666666C57.13671875,77.39999999999999,57.13671875,87.05,57.13671875,91.875L57.13671875,96.7

"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-C" id="L-B-C-0"

d="M57.13671875,135.5L57.13671875,141.20833333333334C57.13671875,146.91666666666666,57.13671875,158.33333333333333

34,57.13671875,168.86666666666667C57.13671875,179.4,57.13671875,189.04999999999998,57.13671875,193.875L57.13671875

,198.7"/></g><g class="edgeLabels"><g transform="translate(57.13671875, 67.75)" class="edgeLabel"><g

transform="translate(-51.8828125, -9.25)" class="label"><foreignObject height="18.5" width="103.765625"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Receives

input</span></div></foreignObject></g></g><g transform="translate(57.13671875, 169.75)" class="edgeLabel"><g

transform="translate(-46.5234375, -9.25)" class="label"><foreignObject height="18.5" width="93.046875"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Sends

output</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(57.13671875, 16.75)"

id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="70.7421875" y="-16.75" x="-35.37109375"

```

```

ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-27.87109375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="55.7421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Main.py</span></div></foreignObject></g></g><g
transform="translate(57.13671875, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="105.3671875" y="-16.75" x="-52.68359375" ry="5" rx="5" style="" class="basic label-container"/><g
transform="translate(-45.18359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="90.3671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Process
Data</span></div></foreignObject></g></g><g transform="translate(57.13671875, 220.75)" id="flowchart-C-3" class="node default
default flowchart-label"><rect height="33.5" width="114.2734375" y="-16.75" x="-57.13671875" ry="5" rx="5" style="" class="basic
label-container"/><g transform="translate(-49.63671875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="99.2734375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Display Result</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-4.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-4.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 620.8125 111.5" style="max-width:
620.812px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

```

```
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
```

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M152.9140625,47.75L165.12239583333334,47.75C177.33072916666666,47.75,201.74739583333334,47.75,225.280729166666
67,47.75C248.8140625,47.75,271.4640625,47.75,282.7890625,47.75L294.1140625,47.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"

d="M392.1006710173557,33.712846741513616L405.25251230612974,29.63570561792801C418.4043535949038,25.55856449434
241,444.70803617245184,17.404282247171206,470.1167369719395,17.808818264657493C495.5254377714271,18.21335428214
378,520.0391567928542,27.176708564287555,532.2960163035677,31.658385705359446L544.5528758142813,36.140062846431
334"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-C LE-B" id="L-C-B-0"

d="M549.5305596539059,57.539864739421375L536.4440861699217,62.324887282851144C523.3576126859373,67.10990982628
091,497.1846657179687,76.67995491314046,471.79007197405485,77.64939436337787C446.3954782301411,78.6188338136152
8,421.7792377102822,70.98766762723056,409.4711174503527,67.1720845340382L397.16299719042325,63.35650144084584"/>

<path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-B LE-C" id="L-B-C-1"

d="M394.2265625,47.75L407.0240885416667,47.75C419.8216145833333,47.75,445.4166666666667,47.75,470.1283854166666,47
.75C494.84010416666666,47.75,518.6684895833333,47.75,530.5826822916666,47.75L542.496875,47.75"/></g><g

class="edgeLabels"><g transform="translate(226.1640625, 47.75)" class="edgeLabel"><g transform="translate(-48.25, -9.25)"

class="label"><foreignObject height="18.5" width="96.5"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Initiates Chat</div></foreignObject></g></g><g

transform="translate(471.01171875, 9.25)" class="edgeLabel"><g transform="translate(-51.78515625, -9.25)"

class="label"><foreignObject height="18.5" width="103.5703125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Sends Message</div></foreignObject></g></g><g

transform="translate(471.01171875, 86.25)" class="edgeLabel"><g transform="translate(-51.78515625, -9.25)"

class="label"><foreignObject height="18.5" width="103.5703125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Sends Message</div></foreignObject></g></g><g


```

transform="translate(471.01171875, 47.75)" class="edgeLabel"><g transform="translate(-51.78515625, -9.25)"
class="label"><foreignObject height="18.5" width="103.5703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Sends Message</span></div></foreignObject></g></g><g
class="nodes"><g transform="translate(76.45703125, 47.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="152.9140625" y="-16.75" x="-76.45703125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-68.95703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="137.9140625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">agent_autoreply.py</span></div></foreignObject></g></g><g transform="translate(346.8203125, 47.75)"
id="flowchart-B-1" class="node default default flowchart-label"><circle height="33.5" width="94.8125" r="47.40625" ry="0" rx="0"
style=""><g transform="translate(-39.90625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="79.8125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User_proxy</span></div></foreignObject></g></g><g transform="translate(576.3046875, 47.75)"
id="flowchart-C-3" class="node default default flowchart-label"><circle height="33.5" width="57.015625" r="28.5078125" ry="0" rx="0"
style=""><g transform="translate(-21.0078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="42.015625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Coder</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-40.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-40.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 761.2734375 383.5" style="max-width:
761.273px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

```

```
ms",verdana,arial,sans-serif;font-size:16px;})#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
```

```
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M234.765625,33.5L234.765625,37.666666666666664C234.765625,41.833333333333336,234.765625,50.166666666666664,234
.765625,57.616666666666667C234.765625,65.066666666666666,234.765625,71.633333333333334,234.765625,74.916666666666667L
234.765625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"
d="M329.0235544535928,117L352.47080058632736,121.166666666666667C375.9180467190619,125.33333333333333,422.812538
98453093,133.66666666666666,446.25978511726544,141.116666666666667C469.70703125,148.56666666666666,469.70703125,1
55.13333333333333,469.70703125,158.41666666666666L469.70703125,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-D" id="L-B-D-0"
d="M234.765625,117L234.765625,121.166666666666667C234.765625,125.33333333333333,234.765625,133.66666666666666,234.
765625,141.116666666666667C234.765625,148.56666666666666,234.765625,155.13333333333333,234.765625,158.416666666666
666L234.765625,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0"
d="M170.91408589071855,117L155.03061845059878,121.166666666666667C139.14715101047904,125.33333333333333,107.3802
161302395,133.66666666666666,91.49674869011976,141.116666666666667C75.61328125,148.56666666666666,75.61328125,155
.13333333333333,75.61328125,158.41666666666666L75.61328125,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"
d="M75.61328125,200.5L75.61328125,204.66666666666666C75.61328125,208.83333333333334,75.61328125,217.166666666666
66,75.61328125,224.616666666666667C75.61328125,232.06666666666667,75.61328125,238.63333333333333,75.61328125,241.91
666666666666L75.61328125,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-G" id="L-C-G-0"
```

d="M391.0754350673653,200.5L371.5153365144711,204.6666666666666C351.95523796157687,208.83333333333334,312.8350
4085578846,217.16666666666666,293.2749423028942,224.61666666666667C273.71484375,232.06666666666667,273.71484375,2
38.63333333333333,273.71484375,241.91666666666666L273.71484375,245.2"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-H" id="L-C-H-0"

d="M469.70703125,200.5L469.70703125,204.6666666666666C469.70703125,208.83333333333334,469.70703125,217.16666666
666666,469.70703125,224.61666666666667C469.70703125,232.06666666666667,469.70703125,238.63333333333333,469.707031
25,241.91666666666666L469.70703125,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-I" id="L-C-I-0"

d="M550.0734936377246,200.5L570.0651509481039,204.6666666666666C590.0568082584831,208.83333333333334,630.04012
28792415,217.16666666666666,650.0317801896208,224.61666666666667C670.0234375,232.06666666666667,670.0234375,238.6
33333333333333,670.0234375,241.91666666666666L670.0234375,245.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-J" id="L-I-J-0"

d="M670.0234375,284L670.0234375,288.16666666666667C670.0234375,292.33333333333333,670.0234375,300.66666666666667,67
0.0234375,308.11666666666667C670.0234375,315.56666666666666,670.0234375,322.13333333333333,670.0234375,325.41666666
66667L670.0234375,328.7"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)"
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g>

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g
transform="translate(234.765625, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="337.4609375" y="-16.75" x="-168.73046875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-161.23046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="322.4609375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">create_memgpt_autogen_agent_from_config</div></foreignObject></g></g></g>
transform="translate(234.765625, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="242.921875" y="-16.75" x="-121.4609375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-113.9609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="227.921875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">create_autogen_memgpt_agent</div></foreignObject></g></g><g transform="translate(469.70703125,
183.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="242.921875" y="-16.75"
x="-121.4609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-113.9609375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="227.921875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">create_autogen_memgpt_agent</div></foreignObject></g></g><g transform="translate(234.765625,
183.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="126.9609375" y="-16.75"
x="-63.48046875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-55.98046875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="111.9609375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">UserProxyAgent</div></foreignObject></g></g><g transform="translate(75.61328125, 183.75)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="91.34375" y="-16.75" x="-45.671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.171875, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="76.34375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">GroupChat</div></foreignObject></g></g><g transform="translate(75.61328125, 267.25)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="151.2265625" y="-16.75" x="-75.61328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-68.11328125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="136.2265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">GroupChatManager</div></foreignObject></g></g><g transform="translate(273.71484375, 267.25)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="141.8515625" y="-16.75" x="-70.92578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-63.42578125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="126.8515625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">AutoGenInterface</div></foreignObject></g></g><g transform="translate(469.70703125, 267.25)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5" width="150.1328125" y="-16.75" x="-75.06640625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.56640625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="135.1328125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">LocalStateManager</div></foreignObject></g></g><g transform="translate(670.0234375, 267.25)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5" width="150.5" y="-16.75" x="-75.25" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.75, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="135.5"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">presets.use_preset</div></foreignObject></g></g><g transform="translate(670.0234375, 350.75)" id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="117.1171875" y="-16.75" x="-58.55859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-51.05859375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="102.1171875"><div

```
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">MemGPTAgent</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-41.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-41.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 138.171875 300" style="max-width:
138.172px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
```

```

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M61.0859375,33.5L61.0859375,37.666666666666664C61.0859375,41.833333333333336,61.0859375,50.166666666666664,61.
0859375,57.616666666666667C61.0859375,65.066666666666666,61.0859375,71.633333333333334,61.0859375,74.91666666666667
L61.0859375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M61.0859375,117L61.0859375,121.16666666666667C61.0859375,125.33333333333333,61.0859375,133.66666666666666,61.0
859375,141.11666666666667C61.0859375,148.56666666666666,61.0859375,155.13333333333333,61.0859375,158.41666666666
66L61.0859375,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M61.0859375,200.5L61.0859375,204.66666666666666C61.0859375,208.83333333333334,61.0859375,217.16666666666666,61

```


.0859375,224.6166666666667C61.0859375,232.0666666666667,61.0859375,238.6333333333333,61.0859375,241.9166666666666666L61.0859375,245.2"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g transform="translate(61.0859375, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="122.171875" y="-16.75" x="-61.0859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.5859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">External entity</div></foreignObject></g></g><g transform="translate(61.0859375, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="80.7890625" y="-16.75" x="-40.39453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-32.89453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="65.7890625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Process 1</div></foreignObject></g></g><g transform="translate(61.0859375, 183.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="80.7890625" y="-16.75" x="-40.39453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-32.89453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="65.7890625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Process 2</div></foreignObject></g></g><g transform="translate(61.0859375, 267.25)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="89.140625" y="-16.75" x="-44.5703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-37.0703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="74.140625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Data store</div></foreignObject></g></g></g></g></g></svg>

High_Level_Doc-42.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-42.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 260.28125 641.3125" style="max-width:
260.281px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
```

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M115.16796875,33.5L115.16796875,39.208333333333336C115.16796875,44.916666666666664,115.16796875,56.3333333333

33336,115.16796875,66.86666666666666C115.16796875,77.39999999999999,115.16796875,87.05,115.16796875,91.875L115.167

96875,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-C" id="L-B-C-0"

d="M115.16796875,135.5L115.16796875,139.66666666666666C115.16796875,143.83333333333334,115.16796875,152.16666666

66666,115.23398515047457,159.70016975753654C115.30000155094915,167.23367284840646,115.43203435189828,173.96734

56968129,115.49805075237286,177.33418212101614L115.56406715284744,180.70101854521937"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-D" id="L-C-D-0"

d="M84.48498707200298,325.629518322003L78.13006735166915,336.45168193500245C71.77514763133532,347.273845548001

93,59.06530819066766,368.918172774001,52.71038847033383,388.24033638700047C46.35546875,407.5625,46.35546875,424.5

625,46.35546875,440.0208333333333C46.35546875,455.4791666666667,46.35546875,469.3958333333333,52.467780174521174,

480.0626353601999C58.58009159904234,490.7294373870666,70.80471444808468,498.14637477413316,76.91702587260586,50

1.8548434676664L83.02933729712703,505.5633121611997"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-E" id="L-C-E-0"

d="M146.85095042799702,325.629518322003L153.0392034816642,336.45168193500245C159.22745653533136,347.2738455480

0193,171.6039626426657,368.918172774001,177.79221569633285,384.5653363870005C183.98046875,400.21250000000003,183

.98046875,409.8625,183.98046875,414.6875L183.98046875,419.5125"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-F" id="L-D-F-0"

d="M115.16796875,541.8125L115.16796875,545.9791666666666C115.16796875,550.1458333333334,115.16796875,558.4791666

666666,115.16796875,565.9291666666667C115.16796875,573.3791666666667,115.16796875,579.9458333333333,115.16796875,

583.2291666666666L115.16796875,586.5125"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-D" id="L-E-D-0"

d="M183.98046875,458.3125L183.98046875,462.4791666666667C183.98046875,466.6458333333333,183.98046875,474.9791666

666667,177.86815732547882,482.8543020268666C171.75584590095764,490.7294373870666,159.5312230519153,498.14637477

413316,153.41891162739412,501.8548434676664L147.30660020287297,505.5633121611997"/></g><g class="edgeLabels"><g

transform="translate(115.16796875, 67.75)" class="edgeLabel"><g transform="translate(-17.35546875, -9.25)"

class="label"><foreignObject height="18.5" width="34.7109375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Read</div></foreignObject></g></g><g

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g

transform="translate(46.35546875, 441.5625)" class="edgeLabel"><g transform="translate(-42.32421875, -9.25)"

class="label"><foreignObject height="18.5" width="84.6484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Under Limit</div></foreignObject></g></g><g

transform="translate(183.98046875, 390.5625)" class="edgeLabel"><g transform="translate(-37.6171875, -9.25)"

class="label"><foreignObject height="18.5" width="75.234375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Over Limit</div></foreignObject></g></g><g

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(115.16796875, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="130.453125" y="-16.75" x="-65.2265625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-57.7265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="115.453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">API Request File</div></foreignObject></g></g><g
transform="translate(115.16796875, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="230.3359375" y="-16.75" x="-115.16796875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-107.66796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="215.3359375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">API Request
Parallel Processor</div></foreignObject></g></g><g transform="translate(115.16796875, 270.90625)" id="flowchart-C-3"
class="node default default flowchart-label"><polygon style="" transform="translate(-85.40625,85.40625)" class="label-container"
points="85.40625,0 170.8125,-85.40625 85.40625,-170.8125 0,-85.40625"/><g transform="translate(-61.15625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="122.3125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Rate Limit Check</div></foreignObject></g></g><g
transform="translate(115.16796875, 525.0625)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"
width="70.046875" y="-16.75" x="-35.0234375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-27.5234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="55.046875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">API
Call</div></foreignObject></g></g><g transform="translate(183.98046875, 441.5625)" id="flowchart-E-7" class="node
default default flowchart-label"><rect height="33.5" width="120.6015625" y="-16.75" x="-60.30078125" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-52.80078125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="105.6015625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Wait and Retry</div></foreignObject></g></g><g

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transform="translate(115.16796875, 608.5625)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5"
width="144.546875" y="-16.75" x="-72.2734375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.7734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="129.546875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Save API
Response</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-43.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-43.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 967.482421875 378.5"
style="max-width: 967.482px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

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ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"><g

id="embeddings" class="cluster default flowchart-label"><rect height="210.5" width="340.37890625" y="0" x="0" ry="0" rx="0"

style=""/><g transform="translate(127.544921875, 0)" class="cluster-label"><foreignObject height="18.5" width="85.2890625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">embeddings</span></div></foreignObject></g></g><g id="chat_completion" class="cluster default

flowchart-label"><rect height="83.5" width="345.544921875" y="127" x="605.9375" ry="0" rx="0" style=""/><g

transform="translate(718.6162109375, 127)" class="cluster-label"><foreignObject height="18.5" width="120.1875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
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class="nodeLabel">chat_completion</span></div></foreignObject></g></g><g id="local_model" class="cluster default
flowchart-label"><rect height="83.5" width="256.6640625" y="279" x="660.46875" ry="0" rx="0" style=""/><g
transform="translate(745.31640625, 279)" class="cluster-label"><foreignObject height="18.5" width="86.96875"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">local_model</span></div></foreignObject></g></g><g id="azure_api" class="cluster default
flowchart-label"><rect height="83.5" width="195.9140625" y="279" x="444.5546875" ry="0" rx="0" style=""/><g
transform="translate(507.53125, 279)" class="cluster-label"><foreignObject height="18.5" width="69.9609375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">azure_api</span></div></foreignObject></g></g><g id="openai_api" class="cluster default flowchart-label"><rect
height="83.5" width="366.22265625" y="279" x="58.33203125" ry="0" rx="0" style=""/><g transform="translate(202.337890625, 279)"
class="cluster-label"><foreignObject height="18.5" width="78.2109375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">openai_api</span></div></foreignObject></g></g></g><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M433.535904752994,185.5L426.59958208582833,189.66666666666666C419.6632594186626,193.83333333333334,405.79061
40843313,202.16666666666666,398.8542914171656,212.04166666666666C391.91796875,221.91666666666666,391.91796875,23
3.33333333333334,369.1438802083333,244.75C346.3697916666667,256.1666666666667,300.8216145833333,267.583333333333
3,283.1599318972356,276.9447767308031C265.4982492111378,286.30622012827286,275.7230609222757,293.6124402565457,2
80.8354667778446,297.26555032068217L285.9478726334135,300.91866038481857"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-C" id="L-A-C-0"
d="M454.4201206961078,185.5L452.6788766217565,189.66666666666666C450.9376325474052,193.83333333333334,447.45514
439870266,202.16666666666666,445.7139003243513,212.04166666666666C443.97265625,221.91666666666666,443.97265625,2
33.33333333333334,465.369140625,244.75C486.765625,256.1666666666667,529.55859375,267.5833333333333,548.8849789759
505,276.7031568686621C568.2113642019009,285.8229804039909,564.0711659038018,292.6459608079818,562.0010667547523,
296.0574510099773L559.9309676057027,299.4689412119727"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
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style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"

d="M495.45668038922156,185.5L503.923535741018,189.66666666666666C512.3903910928144,193.83333333333334,529.3241017964073,202.16666666666666,537.7909571482036,212.04166666666666C546.2578125,221.91666666666666,546.2578125,233.33333333333334,575.7034505208334,244.75C605.1490885416666,256.16666666666667,664.0403645833334,267.5833333333333,703.5665710973144,277.14307119774895C743.0927776112953,286.70280906216465,763.2539145975907,294.4056181243293,773.3344830907384,298.2570226554116L783.4150515838861,302.10842718649394"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-B" id="L-E-B-0"

d="M736.7694610778443,185.5L731.0995508982036,189.66666666666666C725.429640718563,193.83333333333334,714.0898203592815,202.16666666666666,708.4199101796407,212.04166666666666C702.75,221.91666666666666,702.75,233.33333333333334,648.0638020833334,244.75C593.3776041666666,256.16666666666667,484.0052083333333,267.5833333333333,423.9666955951727,276.95904114575933C363.92818285701213,286.33474895818534,353.2235532140242,293.66949791637074,347.87123839253036,297.3368723954634L342.5189235710364,301.0042468745561"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-C" id="L-E-C-0"

d="M762.9436868450599,185.5L763.78477810005,189.66666666666666C764.6258693550399,193.83333333333334,766.3080518650199,202.16666666666666,767.1491431200099,212.04166666666666C767.990234375,221.91666666666666,767.990234375,233.33333333333334,738.7171223958334,244.75C709.4440104166666,256.16666666666667,650.8977864583334,267.5833333333333,617.7500918581648,276.85993507847735C584.6023972579961,286.1365368236214,576.8532320159923,293.2730736472427,572.9786493949904,296.84134205905343L569.1040667739884,300.4096104708641"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-D" id="L-E-D-0"

d="M799.5177067739521,185.5L809.4568129366268,189.66666666666666C819.3959190993014,193.83333333333334,839.2741314246508,202.16666666666666,849.2132375873254,212.04166666666666C859.15234375,221.91666666666666,859.15234375,233.33333333333334,859.15234375,244.75C859.15234375,256.16666666666667,859.15234375,267.5833333333333,856.9421929050881,276.7161508983889C854.7320420601759,285.84896846344446,850.3117403703518,292.697936926889,848.1015895254399,296.1224211586112L845.8914386805277,299.54690539033345"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-B" id="L-F-B-0"

d="M155.2720574476048,185.5L149.10236558133732,189.66666666666666C142.93267371506985,193.83333333333334,130.5932899825349,202.16666666666666,124.42359811626746,212.04166666666666C118.25390625,221.91666666666666,118.25390625,233.33333333333334,118.25390625,244.75C118.25390625,256.16666666666667,118.25390625,267.58333333333333,142.49064777231226,278.4689402157273C166.72738929462454,289.35454709812126,215.20087233924906,299.70909419624246,239.43761386156135,304.88636774530306L263.6743553838736,310.0636412943637"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-C" id="L-F-C-0"

d="M208.21917103293413,185.5L215.22040294411178,189.66666666666666C222.2216348552894,193.83333333333334,236.22409867764472,202.16666666666666,243.22533058882235,212.04166666666666C250.2265625,221.91666666666666,250.2265625,233.33333333333334,292.30078125,244.75C334.375,256.16666666666667,418.5234375,267.58333333333333,464.38022494466037,276.8528288960021C510.2370123893208,286.12232445867085,517.8021497786416,293.24464891734164,521.5847184733019,296.80581114667706L525.3672871679623,300.3669733760125"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-F" id="L-G-F-0"

d="M180.07421875,58.5L180.07421875,64.20833333333333C180.07421875,69.91666666666667,180.07421875,81.33333333333333,180.07421875,92.75C180.07421875,104.16666666666667,180.07421875,115.58333333333333,180.07421875,124.575C180.07421875,133.56666666666666,180.07421875,140.13333333333333,180.07421875,143.41666666666666L180.07421875,146.7"/></g>

><g class="edgeLabels"><g transform="translate(391.91796875, 244.75)" class="edgeLabel"><g transform="translate(-16.02734375, -9.25)" class="label"><foreignObject height="18.5" width="32.0546875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Uses</div></foreignObject></g></g><g

transform="translate(443.97265625, 244.75)" class="edgeLabel"><g transform="translate(-16.02734375, -9.25)"

class="label"><foreignObject height="18.5" width="32.0546875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Uses</div></foreignObject></g></g><g

transform="translate(546.2578125, 244.75)" class="edgeLabel"><g transform="translate(-16.02734375, -9.25)"

class="label"><foreignObject height="18.5" width="32.0546875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Uses</div></foreignObject></g></g><g

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transform="translate(702.75, 244.75)" class="edgeLabel"><g transform="translate(-16.9453125, -9.25)" class="label"><foreignObject
height="18.5" width="33.890625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Calls</span></div></foreignObject></g></g><g
transform="translate(767.990234375, 244.75)" class="edgeLabel"><g transform="translate(-16.9453125, -9.25)"
class="label"><foreignObject height="18.5" width="33.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Calls</span></div></foreignObject></g></g><g
transform="translate(859.15234375, 244.75)" class="edgeLabel"><g transform="translate(-16.9453125, -9.25)"
class="label"><foreignObject height="18.5" width="33.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Calls</span></div></foreignObject></g></g><g
transform="translate(118.25390625, 244.75)" class="edgeLabel"><g transform="translate(-16.9453125, -9.25)"
class="label"><foreignObject height="18.5" width="33.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Calls</span></div></foreignObject></g></g><g
transform="translate(250.2265625, 244.75)" class="edgeLabel"><g transform="translate(-16.9453125, -9.25)"
class="label"><foreignObject height="18.5" width="33.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Calls</span></div></foreignObject></g></g><g
transform="translate(180.07421875, 92.75)" class="edgeLabel"><g transform="translate(-16.9453125, -9.25)"
class="label"><foreignObject height="18.5" width="33.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Calls</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(180.07421875, 168.75)" id="flowchart-F-5" class="node default default flowchart-label"><rect
height="33.5" width="250.609375" y="-16.75" x="-125.3046875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-117.8046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="235.609375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">create_embedding_with_backoff</span></div></foreignObject></g></g><g transform="translate(180.07421875,
41.75)" id="flowchart-G-6" class="node default default flowchart-label"><rect height="33.5" width="227.3671875" y="-16.75"
x="-113.68359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-106.18359375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="212.3671875"><div style="display: inline-block; white-space: nowrap;"
```

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">get_embedding_with_backoff</div></foreignObject></g></g><g transform="translate(759.5625, 168.75)"

id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5" width="237.25" y="-16.75" x="-118.625" ry="0"

rx="0" style="" class="basic label-container"/><g transform="translate(-111.125, -9.25)" style="" class="label"><rect/></foreignObject

height="18.5" width="222.25"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">chat_completion_with_backoff</div></foreignObject></g></g><g transform="translate(832.20703125,

320.75)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5" width="99.8515625" y="-16.75"

x="-49.92578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-42.42578125, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="84.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Local Model</div></foreignObject></g></g><g

transform="translate(547.017578125, 320.75)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5"

width="82.46875" y="-16.75" x="-41.234375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-33.734375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="67.46875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Azure

API</div></foreignObject></g></g><g transform="translate(313.701171875, 320.75)" id="flowchart-B-1" class="node default

default flowchart-label"><rect height="33.5" width="89.6875" y="-16.75" x="-44.84375" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-37.34375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"

width="74.6875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">openai API</div></foreignObject></g></g><g transform="translate(461.419921875, 168.75)"

id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="128.71875" y="-16.75" x="-64.359375"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-56.859375, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="113.71875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">openai_tools.py</div></foreignObject></g></g></g></g></svg>

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-44.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1190.55078125 1088.7734375" style="max-width: 1190.55px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
```

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M625.962890625,33.5L625.962890625,39.208333333333336C625.962890625,44.916666666666664,625.962890625,56.333333

333333336,625.962890625,66.866666666666666C625.962890625,77.39999999999999,625.962890625,87.05,625.962890625,91.87

5L625.962890625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M562.6236874471664,257.91787475690256L552.896367143472,267.9146352140855C543.1690468397776,277.911395671268

4,523.7144062323888,297.9049165856342,516.2057974152659,313.6306529564271C508.6971885981431,329.35638932722,513.

1346115712862,340.81434115443994,515.3533230578578,346.54331706804993L517.5720345444294,352.2722929816599"/><pat

h marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-B LE-D" id="L-B-D-0"

d="M538.1066070649631,215.8527260955976L473.2206751583026,232.86034466299802C408.33474325164207,249.8679632303

9843,278.56287943832103,283.88320036519923,213.67694753166052,319.1102199742663C148.791015625,354.3372395833333,

148.791015625,390.7760416666667,148.791015625,427.21484375C148.791015625,463.6536458333333,148.791015625,500.0924

479166667,148.791015625,526.8118489583334C148.791015625,553.53125,148.791015625,570.53125,148.791015625,587.53125

C148.791015625,604.53125,148.791015625,621.53125,150.01827693038953,635.6455596998356C151.2455382357791,649.7598

693996712,153.7000608465582,660.9884887993425,154.92732215194772,666.602798499178L156.15458345733728,672.217108

1990136"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-E" id="L-B-E-0"

d="M543.918136455793,231.78184990054928L513.6912204839942,246.13461450045773C483.4643045121954,260.48737910036

62,423.01047256859766,289.1929083001831,392.78355659679886,321.7650739417582C362.556640625,354.3372395833333,362

.556640625,390.7760416666667,362.556640625,427.21484375C362.556640625,463.6536458333333,362.556640625,500.0924479

166667,362.556640625,526.8118489583334C362.556640625,553.53125,362.556640625,570.53125,362.556640625,587.53125C36

2.556640625,604.53125,362.556640625,621.53125,392.271139992746,653.1753757235991C421.98563936049203,684.819501447

1984,481.414638095984,731.1077528943966,511.12913746373005,754.2518786179959L540.843636831476,777.3960043415951"

/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-B LE-F" id="L-B-F-0"

d="M706.7655539778463,234.29671935744398L733.9130267523718,248.23033904787C761.0604995268974,262.163958738296,8

15.3554450759488,290.031198119148,842.5029178504743,322.1842188512407C869.650390625,354.3372395833333,869.650390

625,390.7760416666667,869.650390625,427.21484375C869.650390625,463.6536458333333,869.650390625,500.0924479166667,

869.650390625,526.8118489583334C869.650390625,553.53125,869.650390625,570.53125,869.650390625,587.53125C869.65039

0625,604.53125,869.650390625,621.53125,886.5138695584105,651.930017634285C903.3773484918211,682.3287852685701,937

.1043063586422,726.1263205371401,953.9677852920528,748.0250881714252L970.8312642254634,769.9238558057102"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-B" id="L-C-B-0"

d="M573.7053201676866,357.2146008140722L576.2430402439055,350.66190692839353C578.7807603201244,344.10921304271

477,583.8562004725623,331.00382527135736,588.0176371628619,318.9669771381837C592.1790738531615,306.930129005010

14,595.426507081323,295.9618205100203,597.0502236954038,290.47766626252536L598.6739403094846,284.99351201503043"

/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid

flowchart-link LS-D LE-B" id="L-D-B-0"

d="M263.09940510919523,682.9974459452977L265.5636318618294,675.5864132877481C268.02785861446347,668.1753806301
984,272.95631211973176,653.3533153150993,275.42053887236585,637.4422826575496C277.884765625,621.53125,277.884765
625,604.53125,277.884765625,587.53125C277.884765625,570.53125,277.884765625,553.53125,277.884765625,526.8118489583
334C277.884765625,500.0924479166667,277.884765625,463.6536458333333,277.884765625,427.21484375C277.884765625,390
.7760416666667,277.884765625,354.3372395833333,320.8208823235156,320.6896893230806C363.75699902203115,287.042139
0628278,449.6292324190624,256.18584062565554,492.565349117578,240.75769140706947L535.5014658160936,225.32954218
848334"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-E LE-B" id="L-E-B-0"

d="M732.4104968878363,739.7334195595845L741.1718333440303,722.8663912996539C749.9331698002243,705.999363039723,
767.4558427126121,672.2653065198615,776.2171791688061,646.8982782599307C784.978515625,621.53125,784.978515625,60
4.53125,784.978515625,587.53125C784.978515625,570.53125,784.978515625,553.53125,784.978515625,526.8118489583334C7
84.978515625,500.0924479166667,784.978515625,463.6536458333333,784.978515625,427.21484375C784.978515625,390.77604
16666667,784.978515625,354.3372395833333,771.0681516401502,325.1765998556367C757.1577876553002,296.015960127940
1,729.3370596856006,274.13348275588027,715.4266957007508,263.1922440698503L701.516331715901,252.25100538382034/"

><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-F LE-B" id="L-F-B-0"

d="M1040.4077536625268,748.6344664329371L1038.9846514896055,730.283930360781C1037.5615493166845,711.9333942886
248,1034.7153449708424,675.2323221443124,1033.292242797921,648.3817860721562C1031.869140625,621.53125,1031.86914
0625,604.53125,1031.869140625,587.53125C1031.869140625,570.53125,1031.869140625,553.53125,1031.869140625,526.81184
89583334C1031.869140625,500.0924479166667,1031.869140625,463.6536458333333,1031.869140625,427.21484375C1031.869
140625,390.7760416666667,1031.869140625,354.3372395833333,979.5284412085939,319.98979890607205C927.187741792187
9,285.6423582288108,822.506342959376,253.3862789576216,770.1656435429699,237.25823932202704L717.8249441265638,22
1.13019968643246"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-G LE-B" id="L-G-B-0"

d="M632.8513614430148,570.78125L640.481928806679,565.0729166666666C648.1124961703432,559.3645833333334,663.3736
308976717,547.9479166666666,671.0041982613358,524.0201822916666C678.634765625,500.0924479166667,678.634765625,46

3.6536458333333,678.634765625,427.21484375C678.634765625,390.7760416666667,678.634765625,354.3372395833333,676.07
39728397978,330.03700020071506C673.5131800545955,305.7367608180968,668.3915944841909,293.57508413619354,665.830
8016989887,287.4942457952419L663.2700089137865,281.4134074542903"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-C" id="L-G-C-0"
d="M645.0046051623774,570.78125L656.7769496144812,565.0729166666666C668.5492940665849,559.3645833333334,692.093
9829707926,547.9479166666666,686.9399907554576,531.2936900545749C681.7859985401227,514.6394634424831,647.933325
2052453,492.7476768849662,631.0069885378067,481.8017836062077L614.080651870368,470.85589032744934"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G
LE-D" id="L-G-D-0"
d="M539.77734375,596.0199520590629L480.7802734375,603.1051683825525C421.783203125,610.190384706042,303.7890625,6
24.3608173530209,245.08830940466444,636.333739511114C186.38755630932891,648.3066616692071,186.98019074365786,65
8.0820733384143,187.2765079608223,662.9697791730177L187.57282517798677,667.8574850076213"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G
LE-E" id="L-G-E-0"
d="M610.4609375,604.28125L610.4609375,609.9895833333334C610.4609375,615.6979166666666,610.4609375,627.1145833333
334,613.5750660053678,646.6277545215099C616.6891945107355,666.1409257096865,622.9174515214712,693.7506014193729,
626.031580026839,707.555439274216L629.1457085322069,721.3602771290592"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G
LE-F" id="L-G-F-0"
d="M681.14453125,599.4866719755022L719.6181640625,605.9941016462518C758.091796875,612.5015313170014,835.0390625,
625.5163906585008,885.5357874714904,652.4250248254565C936.0325124429805,679.3336589924121,960.0786967609611,720.
1360679848243,972.1017889199514,740.5372724810303L984.1248810789416,760.9384769772363"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-G" id="L-B-G-0"
d="M547.8268560302761,239.12539378217352L525.6711430460633,252.25423440181126C503.51543006185074,265.383075021
44903,459.20400409342534,291.6407562607245,437.04829110921264,322.9889979220289C414.892578125,354.3372395833333,

414.892578125,390.7760416666667,414.892578125,427.21484375C414.892578125,463.6536458333333,414.892578125,500.0924

479166667,435.92742628052565,523.7972825906459C456.96227443605136,547.5021172646251,499.0319707471028,558.47298

45292502,520.0668189026284,563.9584181615627L541.1016670581541,569.4438517938753"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-G" id="L-C-G-0"

d="M546.595703125,502.28125L546.595703125,507.9895833333333C546.595703125,513.6979166666666,546.595703125,525.11

45833333334,553.0537645471469,535.9800437915054C559.5118259692939,546.8455042496774,572.4279488135878,557.15975

84993549,578.8860102357347,562.3168856241936L585.3440716578817,567.4740127490323"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D

LE-G" id="L-D-G-0"

d="M291.316819940362,694.8476877526825L296.1341338044683,685.4616147939022C300.95144766857464,676.075541835121

7,310.5860753967873,657.3033959175608,351.1261585096856,641.6402427475838C391.66624162258387,625.9770895776068,4

63.1117801201677,613.4229291552134,498.83454936895964,607.1458489440167L534.5573186177515,600.8687687328201"/><p

ath marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-E LE-G" id="L-E-G-0"

d="M749.2911659983073,749.9662765350319L762.2950471860895,731.3937721125266C775.2989283738716,712.821267690021

2,801.3066907494358,675.6762588450106,790.808791651024,651.5765634468764C780.3108925526122,627.4768680487423,733

.3073319802246,616.4224860974847,709.8055516940307,610.8952951218558L686.3037714078368,605.368104146227"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F

LE-G" id="L-F-G-0"

d="M1059.6625588374732,748.6344664329371L1061.0856610103945,730.283930360781C1062.5087631833155,711.9333942886

248,1065.3549675291576,675.2323221443124,1003.1465307254307,649.792156967911C940.9380939217034,624.351991791509

5,813.6750159684067,610.1727335830188,750.0434769917584,603.0831044787735L686.4119380151102,595.9934753745282"/>

</g><g class="edgeLabels"><g transform="translate(625.962890625, 67.75)" class="edgeLabel"><g

transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(504.259765625, 317.8984375)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(148.791015625, 536.53125)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(362.556640625, 536.53125)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(869.650390625, 536.53125)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(588.931640625, 317.8984375)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(277.884765625, 536.53125)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(784.978515625, 536.53125)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(1031.869140625, 536.53125)"

class="edgeLabel"><g transform="translate(-32.3359375, -9.25)" class="label"><foreignObject height="18.5" width="64.671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Messages</div></foreignObject></g></g><g transform="translate(678.634765625, 427.21484375)"

class="edgeLabel"><g transform="translate(-17.00390625, -9.25)" class="label"><foreignObject height="18.5"

width="34.0078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load</div></foreignObject></g></g><g transform="translate(715.638671875, 536.53125)" class="edgeLabel"><g transform="translate(-17.00390625, -9.25)" class="label"><foreignObject height="18.5" width="34.0078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load</div></foreignObject></g></g><g transform="translate(185.794921875, 638.53125)" class="edgeLabel"><g transform="translate(-17.00390625, -9.25)" class="label"><foreignObject height="18.5" width="34.0078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load</div></foreignObject></g></g><g transform="translate(610.4609375, 638.53125)" class="edgeLabel"><g transform="translate(-17.00390625, -9.25)" class="label"><foreignObject height="18.5" width="34.0078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load</div></foreignObject></g></g><g transform="translate(911.986328125, 638.53125)" class="edgeLabel"><g transform="translate(-17.00390625, -9.25)" class="label"><foreignObject height="18.5" width="34.0078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load</div></foreignObject></g></g><g transform="translate(414.892578125, 427.21484375)" class="edgeLabel"><g transform="translate(-16.33203125, -9.25)" class="label"><foreignObject height="18.5" width="32.6640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Save</div></foreignObject></g></g><g transform="translate(546.595703125, 536.53125)" class="edgeLabel"><g transform="translate(-16.33203125, -9.25)" class="label"><foreignObject height="18.5" width="32.6640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Save</div></foreignObject></g></g><g transform="translate(320.220703125, 638.53125)" class="edgeLabel"><g transform="translate(-16.33203125, -9.25)" class="label"><foreignObject height="18.5" width="32.6640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Save</div></foreignObject></g></g><g transform="translate(827.314453125, 638.53125)" class="edgeLabel"><g transform="translate(-16.33203125, -9.25)" class="label"><foreignObject height="18.5" width="32.6640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Save</div></foreignObject></g></g><g transform="translate(1068.201171875, 638.53125)"

```
class="edgeLabel"><g transform="translate(-16.33203125, -9.25)" class="label"><foreignObject height="18.5"
width="32.6640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Save</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(625.962890625,
16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="56.28125" y="-16.75"
x="-28.140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-20.640625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="41.28125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Agent</span></div></foreignObject></g></g><g
transform="translate(625.962890625, 192.82421875)" id="flowchart-B-1" class="node default default flowchart-label"><circle
height="33.5" width="181.6484375" r="90.82421875" ry="0" rx="0" style=""><g transform="translate(-83.32421875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="166.6484375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">InMemoryStateManager</span></div></foreignObject></g></g><g
transform="translate(546.595703125, 427.21484375)" id="flowchart-C-3" class="node default default flowchart-label"><circle
height="33.5" width="150.1328125" r="75.06640625" ry="0" rx="0" style=""><g transform="translate(-67.56640625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="135.1328125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">LocalStateManager</span></div></foreignObject></g></g><g
transform="translate(199.99609375, 872.77734375)" id="flowchart-D-5" class="node default default flowchart-label"><circle
height="33.5" width="399.9921875" r="199.99609375" ry="0" rx="0" style=""><g transform="translate(-192.49609375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="384.9921875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">InMemoryStateManagerWithPreloadedArchivalMemory</span></div></foreignObject></g></g><g
transform="translate(663.302734375, 872.77734375)" id="flowchart-E-7" class="node default default flowchart-label"><circle
height="33.5" width="299.84375" r="149.921875" ry="0" rx="0" style=""><g transform="translate(-142.421875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="284.84375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">InMemoryStateManagerWithEmbeddings</span></div></foreignObject></g></g><g
transform="translate(1050.03515625, 872.77734375)" id="flowchart-F-9" class="node default default flowchart-label"><circle
```

```

height="33.5" width="249.03125" r="124.515625" ry="0" rx="0" style=""/><g transform="translate(-117.015625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="234.03125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">InMemoryStateManagerWithFaiss</span></div></foreignObject></g></g><g transform="translate(610.4609375,
587.53125)" id="flowchart-G-18" class="node default default flowchart-label"><rect height="33.5" width="141.3671875" y="-16.75"
x="-70.68359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-63.18359375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="126.3671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Memory
Database</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-45.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-45.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 626.7109375 73" style="max-width:
626.711px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

```

```
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-User LE-A" id="L-User-A-0"
d="M46.796875,24.874206024778317L63.6015625,22.270171687315266C80.40625,19.66613734985221,114.015625,14.45806867
4926105,146.74999033942112,14.05647106817223C179.48435567884223,13.654873461418356,211.34371135768447,18.059746
```

922836712,227.27338919710556,20.262183653545893L243.2030670365267,22.46462038425507"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A

LE-User" id="L-A-User-0"

d="M248.453125,33.80950677552394L231.6484375,36.13292231293662C214.84375,38.45633785034929,181.234375,43.1031689

2517465,148.49791518214346,42.95781602090451C115.76145536428692,42.812463116634355,83.89791072857383,37.8749262

3326872,67.96613841071729,35.4061577915859L52.03436609286076,32.93738934990308"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A

LE-B" id="L-A-B-0"

d="M325.2578125,22.93375540457072L340.9921875,20.653129503808934C356.7265625,18.372503603047146,388.1953125,13.8

11251801523573,418.7886554609247,13.534703685846816C449.38199842184935,13.258155570170059,479.09993434369864,17

.266311140340118,493.95890230462334,19.27038892542515L508.81787026554804,21.274466710510175"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B

LE-A" id="L-B-A-0"

d="M514.0703125,35.01711916361049L498.3359375,37.13926596967541C482.6015625,39.261412775740325,451.1328125,43.50

570638787016,420.5382604740418,43.47393830279352C389.94370844808356,43.44217021771687,360.2233543961672,39.1343

4043543375,345.36317737020903,36.98042554429219L330.50300034425084,34.82651065315063"/></g><g

class="edgeLabels"><g transform="translate(147.625, 9.25)" class="edgeLabel"><g transform="translate(-75.828125, -9.25)"

class="label"><foreignObject height="18.5" width="151.65625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Request Persona Text</div></foreignObject></g></g><g

transform="translate(147.625, 47.75)" class="edgeLabel"><g transform="translate(-71.25, -9.25)" class="label"><foreignObject

height="18.5" width="142.5"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Return Persona Text</div></foreignObject></g></g><g transform="translate(419.6640625, 9.25)"

class="edgeLabel"><g transform="translate(-63.04296875, -9.25)" class="label"><foreignObject height="18.5"

width="126.0859375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Read Persona File</div></foreignObject></g></g><g transform="translate(419.6640625, 47.75)"

class="edgeLabel"><g transform="translate(-69.40625, -9.25)" class="label"><foreignObject height="18.5" width="138.8125"><div


```

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Return Persona
File</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(23.3984375, 28.5)" id="flowchart-User-0"
class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">User</span></div></foreignObject></g></g><g
transform="translate(286.85546875, 28.5)" id="flowchart-A-1" class="node default default flowchart-label"><rect height="33.5"
width="76.8046875" y="-16.75" x="-38.40234375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-30.90234375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="61.8046875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Personas</span></div></foreignObject></g></g><g transform="translate(562.390625, 28.5)" id="flowchart-B-5"
class="node default default flowchart-label"><rect height="33.5" width="96.640625" y="-16.75" x="-48.3203125" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-40.8203125, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="81.640625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">File
System</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-46.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-46.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 882.8359375 216.5" style="max-width:
882.836px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

```

```
ms",verdana,arial,sans-serif;font-size:16px;})#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
```

```
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M637.556640625,21.034308139369248L596.5423177083334,27.278590116141043C555.5279947916666,33.52287209291283,4
73.4993489583333,46.01143604645642,432.4850260416667,55.539051356561544C391.470703125,65.06666666666666,391.4707
03125,71.63333333333334,391.470703125,74.91666666666667L391.470703125,78.2"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M345.099609375,106.0221179546606L296.9274088541667,112.01843162888383C248.75520833333334,118.01474530310706,
152.41080729166666,130.00737265155354,105.03085377769277,139.31131757941492C57.650900263718874,148.615262507276
3,59.23539427743774,155.2305250145526,60.02764128429718,158.53815626819076L60.81988829115662,161.8457875218289"/
><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-D" id="L-B-D-0"
d="M345.099609375,109.3256880733945L317.275390625,114.77140672782876C289.451171875,120.217125382263,233.8027343
75,131.1085626911315,214.36441132425344,140.35620517146327C194.92608827350693,149.60384765179504,211.6978796720
1387,157.2076953035901,220.0837753712673,161.00961912948762L228.4696710705208,164.81154295538514"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-E" id="L-B-E-0"
d="M391.470703125,117L391.470703125,121.16666666666667C391.470703125,125.33333333333333,391.470703125,133.666666
66666666,400.7567427339625,141.6632043067494C410.04278234292497,149.65974194683216,428.61486156084993,157.31948
389366434,437.9009011698124,161.1493548670804L447.1869407787749,164.9792258404965"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-F" id="L-B-F-0"
d="M437.841796875,109.39156007045955L465.4098307291667,114.82630005871628C492.9778645833333,120.26104004697304,
```

548.1139322916666,131.13052002348653,583.916795712446,140.36207026185994C619.7196591332252,149.5936205002334,63
6.1893182664503,157.1872410004668,644.4241478330629,160.98405125058352L652.6589773996755,164.7808615007002"/><pa
th marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-B LE-G" id="L-B-G-0"

d="M437.841796875,105.28146350872562L494.2428385416667,111.40121959060468C550.6438802083334,117.52097567248374,
663.4459635416666,129.76048783624188,725.3449332046644,139.55596120613185C787.2439028676621,149.35143457602183,
798.2397588603243,156.70286915204363,803.7376868566553,160.37858644005453L809.2356148529864,164.05430372806546"/
><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-C LE-B" id="L-C-B-0"

d="M103.0118473989521,167L112.20225564496008,162.83333333333334C121.39266389096808,158.66666666666666,139.77348
038298405,150.33333333333334,179.2519187704319,140.74687952555078C218.73035715787978,131.16042571776828,279.306
4174407596,120.32085143553654,309.5944475821995,114.90106429442066L339.8824777236394,109.4812771533048"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-B" id="L-D-B-0"

d="M310.85482550523955,167L320.9574717751996,162.83333333333334C331.0601180451597,158.66666666666666,351.265410
5850799,150.33333333333334,362.9824395059414,142.79664288290982C374.699468426803,135.2599524324863,377.92823372
8606,128.51990486497257,379.5426163795075,125.14988108121572L381.15699903040894,121.77985729745886"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-B" id="L-E-B-0"

d="M529.0279752994012,167L538.0649794161676,162.83333333333334C547.1019835329341,158.66666666666666,565.1759917
664671,150.33333333333334,550.8414128018024,141.0787160403499C536.506833837138,131.82409874736646,489.763667674
27584,121.64819749473293,466.3920845928448,116.56024686841614L443.0205015114137,111.47229624209938"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-B" id="L-F-B-0"

d="M718.8544746444611,167L725.0867366828843,162.83333333333334C731.3189987213074,158.66666666666666,743.7835227
981537,150.33333333333334,697.8256804190656,140.19333280488925C651.8678380399778,130.0533322764452,547.48762920

[illegible]

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g

transform="translate(665.697265625, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"

width="56.28125" y="-16.75" x="-28.140625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-20.640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="41.28125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Agent</div></foreignObject></g></g><g transform="translate(391.470703125, 100.25)"

id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="92.7421875" y="-16.75" x="-46.37109375"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.87109375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="77.7421875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">use_preset</div></foreignObject></g></g><g

transform="translate(66.06640625, 183.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"

width="132.1328125" y="-16.75" x="-66.06640625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-58.56640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="117.1328125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">load_all_presets</div></foreignObject></g></g><g transform="translate(270.2421875, 183.75)"

id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="176.21875" y="-16.75" x="-88.109375"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-80.609375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="161.21875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">load_all_function_sets</div></foreignObject></g></g><g

transform="translate(492.69921875, 183.75)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"

width="168.6953125" y="-16.75" x="-84.34765625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-76.84765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="153.6953125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

```

class="nodeLabel">is_valid_yaml_format</span></div></foreignObject></g></g><g transform="translate(693.80078125, 183.75)"
id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="133.5078125" y="-16.75"
x="-66.75390625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-59.25390625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="118.5078125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">get_system_text</span></div></foreignObject></g></g><g
transform="translate(838.6953125, 183.75)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5"
width="56.28125" y="-16.75" x="-28.140625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-20.640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="41.28125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Agent</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-47.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-47.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 334.4375 253.5" style="max-width:
334.438px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

```

```

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M167.21875,33.5L167.21875,39.208333333333336C167.21875,44.916666666666664,167.21875,56.333333333333336,167.218

```



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75,66.8666666666666666C167.21875,77.399999999999999,167.21875,87.05,167.21875,91.875L167.21875,96.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"

d="M136.96714154411765,135.5L126.65751378676471,141.20833333333334C116.34788602941177,146.91666666666666,95.728
6305147059,158.33333333333334,85.41900275735294,168.86666666666667C75.109375,179.4,75.109375,189.04999999999998,7
5.109375,193.875L75.109375,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M197.47035845588235,135.5L207.77998621323528,141.20833333333334C218.0896139705882,146.91666666666666,238.708
86948529412,158.33333333333334,249.01849724264707,168.86666666666667C259.328125,179.4,259.328125,189.04999999999
98,259.328125,193.875L259.328125,198.7"/></g><g class="edgeLabels"><g transform="translate(167.21875, 67.75)"
class="edgeLabel"><g transform="translate(-18.59765625, -9.25)" class="label"><foreignObject height="18.5"
width="37.1953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Input</span></div></foreignObject></g></g><g transform="translate(75.109375, 169.75)" class="edgeLabel"><g
transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5" width="49.8671875"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(259.328125, 169.75)"
class="edgeLabel"><g transform="translate(-17.90625, -9.25)" class="label"><foreignObject height="18.5" width="35.8125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Error</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(167.21875, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="115.75" y="-16.75" x="-57.875" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-50.375, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="100.75"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Function Calls</span></div></foreignObject></g></g><g transform="translate(167.21875, 118.75)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="167.4921875" y="-16.75"
x="-83.74609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-76.24609375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="152.4921875"><div style="display: inline-block; white-space: nowrap;"

```

```

xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">schema_generator.py</span></div></foreignObject></g></g><g
transform="translate(75.109375, 220.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"
width="150.21875" y="-16.75" x="-75.109375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-67.609375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="135.21875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Generated
Schema</span></div></foreignObject></g></g><g transform="translate(259.328125, 220.75)" id="flowchart-D-5" class="node default
default flowchart-label"><rect height="33.5" width="118.21875" y="-16.75" x="-59.109375" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-51.609375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"
width="103.21875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Error Handling</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-48.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-48.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1040.5546875 49.5" style="max-width:
1040.55px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

```

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.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M124.6328125,16.75L128.79947916666666,16.75C132.96614583333334,16.75,141.29947916666666,16.75,148.74947916666666

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67,16.75C156.19947916666666,16.75,162.76614583333333,16.75,166.04947916666666,16.75L169.3328125,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"

d="M404.7578125,16.75L408.9244791666667,16.75C413.09114583333333,16.75,421.4244791666667,16.75,428.8744791666666,16
.75C436.32447916666666,16.75,442.89114583333334,16.75,446.1744791666667,16.75L449.4578125,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"

d="M523.796875,16.75L527.9635416666666,16.75C532.13020833333334,16.75,540.4635416666666,16.75,547.9135416666667,16.
75C555.3635416666667,16.75,561.9302083333333,16.75,565.2135416666666,16.75L568.496875,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-E" id="L-D-E-0"

d="M803.921875,16.75L808.0885416666666,16.75C812.25520833333334,16.75,820.5885416666666,16.75,828.0385416666667,16.
75C835.4885416666666,16.75,842.0552083333333,16.75,845.3385416666666,16.75L848.621875,16.75"/></g><g
class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g
transform="translate(62.31640625, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="124.6328125" y="-16.75" x="-62.31640625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-54.81640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="109.6328125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span


```
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
```

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M46.796875,30.115617433414045L50.963541666666664,27.88801452784504C55.130208333333336,25.66041162227603,63.4

63541666666664,21.205205811138015,70.91354166666666,18.977602905569007C78.36354166666666,16.75,84.93020833333333

4,16.75,88.21354166666667,16.75L91.496875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M168.953125,16.75L173.11979166666666,16.75C177.28645833333334,16.75,185.61979166666666,16.75,193.06979166666666

7,16.75C200.51979166666667,16.75,207.08645833333333,16.75,210.36979166666666,16.75L213.653125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C

LE-D" id="L-C-D-0"

d="M368.1953125,16.75L372.36197916666667,16.75C376.52864583333333,16.75,384.86197916666667,16.75,392.31197916666666,16

.75C399.76197916666666,16.75,406.32864583333334,16.75,409.61197916666667,16.75L412.8953125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D

LE-E" id="L-D-E-0"

d="M485.7734375,16.75L489.94010416666667,16.75C494.10677083333333,16.75,502.44010416666667,16.75,509.96806372486566,1

8.264330688533637C517.4960232830646,19.77866137706727,524.2186090661293,22.807322754134542,527.5799019576615,24.

32165344266818L530.9411948491938,25.835984131201815"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-A" id="L-E-A-0"

d="M535.7734375,57.236992450520304L531.60677083333334,59.114160375433585C527.44010416666666,60.99132830034687,519

.10677083333334,64.74566415017343,505.14192708333333,66.62283207508672C491.17708333333333,68.5,471.58072916666667,68.

5,451.984375,68.5C432.3880208333333,68.5,412.7916666666667,68.5,386.3899739583333,68.5C359.98828125,68.5,326.78125,68.5,293.57421875,68.5C260.3671875,68.5,227.16015625,68.5,200.376953125,68.5C173.59375,68.5,153.234375,68.5,132.875,68.5C112.515625,68.5,92.15625,68.5,78.58888950307131,66.68886634934175C65.02152900614263,64.87773269868352,58.24618301228526,61.25546539736704,54.85851001535658,59.4443317467088L51.47083701842789,57.633198096050556"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g transform="translate(23.3984375, 42.625)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g transform="translate(132.875, 16.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="72.15625" y="-16.75" x="-36.078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.578125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="57.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Interact</div></foreignObject></g></g><g transform="translate(293.57421875, 16.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="149.2421875" y="-16.75" x="-74.62109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.12109375, -9.25)" style="" class="label"><rect/><foreignObject


```

height="18.5" width="134.2421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">settings.py Module</span></div></foreignObject></g></g><g
transform="translate(451.984375, 16.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"
width="67.578125" y="-16.75" x="-33.7890625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-26.2890625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="52.578125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Process</span></div></foreignObject></g></g><g transform="translate(568.20703125, 42.625)"
id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="64.8671875" y="-16.75" x="-32.43359375"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-24.93359375, -9.25)" style=""
class="label"><rect/></foreignObject height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Output</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-5.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-5.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-7.5 -8 1305.171875 119.5" style="max-width:
1305.17px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

```

```

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"/><g class="edgeLabels"/><g class="nodes"><g transform="translate(-7.5, -8)" class="root"><g

class="clusters"><g id="agent_docs.py" class="cluster default flowchart-label"><rect height="103.5" width="1289.171875" y="8" x="8"

```

```
ry="0" rx="0" style=""/><g transform="translate(600.9765625, 8)" class="cluster-label"><foreignObject height="18.5"
width="103.21875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">agent_docs.py</span></div></foreignObject></g></g></g><g class="edgePaths"><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-User_Input LE-AutoGen_and_MemGPT" id="L-User_Input-AutoGen_and_MemGPT-0"
d="M121.8125,59.75L131.91080729166666,59.75C142.00911458333334,59.75,162.20572916666666,59.75,181.51901041666667,5
9.75C200.83229166666667,59.75,219.26223958333333,59.75,228.47721354166666,59.75L237.6921875,59.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-AutoGen_and_MemGPT LE-Config" id="L-AutoGen_and_MemGPT-Config-0"
d="M502.515625,59.75L510.6744791666667,59.75C518.8333333333334,59.75,535.1510416666666,59.75,550.5854166666667,59.
75C566.0197916666667,59.75,580.5708333333333,59.75,587.8463541666666,59.75L595.121875,59.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-Config LE-Agents" id="L-Config-Agents-0"
d="M712.4296875,59.75L720.2649739583334,59.75C728.1002604166666,59.75,743.7708333333334,59.75,758.5580729166667,59
.75C773.3453125,59.75,787.2492187500001,59.75,794.201171875,59.75L801.153125,59.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-Agents LE-GroupChat" id="L-Agents-GroupChat-0"
d="M935.1875,59.75L943.7083333333334,59.75C952.2291666666666,59.75,969.2708333333334,59.75,985.4291666666667,59.75
C1001.5875,59.75,1016.8625000000001,59.75,1024.5,59.75L1032.1375,59.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-GroupChat LE-Output" id="L-GroupChat-Output-0"
d="M1133.6015625,59.75L1139.7434895833333,59.75C1145.8854166666667,59.75,1158.1692708333333,59.75,1169.5697916666
66,59.75C1180.9703124999999,59.75,1191.4875,59.75,1196.74609375,59.75L1202.0046875,59.75"/></g><g
class="edgeLabels"><g transform="translate(182.40234375, 59.75)" class="edgeLabel"><g transform="translate(-35.58984375,
-9.25)" class="label"><foreignObject height="18.5" width="71.1796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">pip install</span></div></foreignObject></g></g><g
```

transform="translate(551.46875, 59.75)" class="edgeLabel"><g transform="translate(-23.953125, -9.25)"

class="label"><foreignObject height="18.5" width="47.90625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">import</div></foreignObject></g></g><g

transform="translate(759.44140625, 59.75)" class="edgeLabel"><g transform="translate(-22.01171875, -9.25)"

class="label"><foreignObject height="18.5" width="44.0234375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">set up</div></foreignObject></g></g><g

transform="translate(986.3125, 59.75)" class="edgeLabel"><g transform="translate(-26.125, -9.25)" class="label"><foreignObject

height="18.5" width="52.25"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">initiate</div></foreignObject></g></g><g transform="translate(1170.453125, 59.75)"

class="edgeLabel"><g transform="translate(-11.8515625, -9.25)" class="label"><foreignObject height="18.5" width="23.703125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">run</div></foreignObject></g></g></g><g class="nodes"><a transform="translate(372.75390625, 59.75)"

xlink:href="https://github.com/microsoft/autogen/blob/main/notebook/agentchat_groupchat.ipynb"><g

id="flowchart-AutoGen_and_MemGPT-1" class="node default clickable flowchart-label"><rect height="33.5" width="259.5234375"

y="-16.75" x="-129.76171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-122.26171875, -9.25)"

style="" class="label"><rect/><foreignObject height="18.5" width="244.5234375"><div style="display: inline-block; white-space:

nowrap;" xmlns="http://www.w3.org/1999/xhtml">AutoGen and MemGPT

Installation</div></foreignObject></g></g><a transform="translate(77.40625, 59.75)"

xlink:href="https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"><g id="flowchart-User_Input-0" class="node default

clickable flowchart-label"><rect height="33.5" width="88.8125" y="-16.75" x="-44.40625" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-36.90625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="73.8125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">User Input</div></foreignObject></g></g><a transform="translate(656.42578125, 59.75)"

xlink:href="https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"><g id="flowchart-Config-3" class="node default

clickable flowchart-label"><rect height="33.5" width="112.0078125" y="-16.75" x="-56.00390625" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-48.50390625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

```

width="97.0078125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Configuration</span></div></foreignObject></g></g></a><a transform="translate(870.8203125, 59.75)"
xlink:href="https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"><g id="flowchart-Agents-5" class="node default
clickable flowchart-label"><rect height="33.5" width="128.734375" y="-16.75" x="-64.3671875" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-56.8671875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="113.734375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Agents Creation</span></div></foreignObject></g></g></a><a transform="translate(1085.51953125, 59.75)"
xlink:href="https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"><g id="flowchart-GroupChat-7" class="node default
clickable flowchart-label"><rect height="33.5" width="96.1640625" y="-16.75" x="-48.08203125" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-40.58203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="81.1640625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Group Chat</span></div></foreignObject></g></g></a><a transform="translate(1239.73828125, 59.75)"
xlink:href="https://memgpt.readthedocs.io/en/latest/autogen/#loading-documents"><g id="flowchart-Output-9" class="node default
clickable flowchart-label"><rect height="33.5" width="64.8671875" y="-16.75" x="-32.43359375" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-24.93359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Output</span></div></foreignObject></g></g></a></g></g></g></g></svg>

```

High_Level_Doc-50.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-50.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 447.2265625 73" style="max-width:
447.227px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

```

```
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
```

```
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-User LE-settings.py" id="L-User-settings.py-0"
d="M46.796875,22.94301204819277L56.40625,20.660843373493975C66.015625,18.37867469879518,85.234375,13.81433734939
759,103.58444966935467,13.144648290263495C121.93452433870932,12.474959231129398,139.41592367741868,15.699918462
258795,148.15662334677333,17.312398077823495L156.897323016128,18.924877693388193"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-settings.py LE-User" id="L-settings.py-User-0"
d="M162.109375,37.11360573503538L152.5,38.88633811252948C142.890625,40.65907049002359,123.671875,44.204535245011
79,105.31255345040488,43.89920802749844C86.95323190080977,43.59388080998508,69.45333880161952,39.43776161997017,
60.7033922520244,37.35970202496271L51.95344570242928,35.281642429955255"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-settings.py LE-Server" id="L-settings.py-Server-0"
d="M255.4921875,19.886394264964622L265.1015625,18.113661887470517C274.7109375,16.340929509976416,293.9296875,12.
795464754988208,312.28556875406684,12.938922597999186C330.6414500081337,13.082380441010166,348.1344625162674,16
.91476088202033,356.88096877033416,18.830951102525415L365.627475024401,20.747141323030498"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-Server LE-settings.py" id="L-Server-settings.py-0"
d="M370.8046875,35.118631635102695L361.1953125,37.22385969591891C351.5859375,39.32908775673513,332.3671875,43.53
954387836757,314.0171128306453,44.03229232361909C295.6670381612907,44.5250407688706,278.1856388225813,41.300081
53774121,269.44493915322664,39.687601922176505L260.70423948387196,38.07512230661181"/></g><g
class="edgeLabels"><g transform="translate(104.453125, 9.25)" class="edgeLabel"><g transform="translate(-28.296875, -9.25)"
class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;"
```


(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-51.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 870.2265625 132.5390625" style="max-width: 870.227px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
```

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M46.796875,58.26953125L54.0631510416666664,58.26953125C61.329427083333336,58.26953125,75.86197916666667,58.269

53125,89.51119791666667,58.26953125C103.16041666666666,58.26953125,115.92630208333333,58.26953125,122.3092447916

6667,58.26953125L128.6921875,58.26953125"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M227.375,58.26953125L235.92317708333334,58.26953125C244.47135416666666,58.26953125,261.56770833333333,58.26953

125,277.8641036650052,58.3443367965219C294.160498996677,58.4191423430438,309.656935493354,58.5687534360876,317.4

051537416925,58.6435589826095L325.153371990031,58.71836452913139"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M446.9921875,58.76953125L455.2311197916667,58.686197916666664C463.4700520833333,58.602864583333336,479.94791

66666667,58.436197916666664,495.62578125,58.352864583333336C511.30364583333335,58.26953125,526.1815104166667,58.

26953125,533.6204427083334,58.26953125L541.059375,58.26953125"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"

d="M690.265625,58.26953125L698.587890625,58.26953125C706.91015625,58.26953125,723.5546875,58.26953125,739.3158854
166667,58.26953125C755.07708333333332,58.26953125,769.9549479166667,58.26953125,777.3938802083334,58.26953125L784.
8328125,58.26953125"/></g><g class="edgeLabels"><g transform="translate(90.39453125, 58.26953125)" class="edgeLabel"><g
transform="translate(-18.59765625, -9.25)" class="label"><foreignObject height="18.5" width="37.1953125"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Input</div></foreignObject></g></g><g transform="translate(278.6640625, 58.26953125)"
class="edgeLabel"><g transform="translate(-26.2890625, -9.25)" class="label"><foreignObject height="18.5" width="52.578125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Process</div></foreignObject></g></g><g transform="translate(496.42578125, 58.26953125)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</div></foreignObject></g></g><g transform="translate(740.19921875, 58.26953125)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(23.3984375,
58.26953125)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75"
x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g
transform="translate(180.68359375, 58.26953125)" id="flowchart-B-1" class="node default default flowchart-label"><circle
height="33.5" width="93.3828125" r="46.69140625" ry="0" rx="0" style=""><g transform="translate(-39.19140625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="78.3828125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">settings.py</div></foreignObject></g></g><g
transform="translate(388.22265625, 58.26953125)" id="flowchart-C-3" class="node default default flowchart-label"><polygon style=""
transform="translate(-58.26953125,58.26953125)" class="label-container" points="58.26953125,0 116.5390625,-58.26953125
58.26953125,-116.5390625 0,-58.26953125"/><g transform="translate(-34.01953125, -9.25)" style=""


```
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
```

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M93.3828125,58.5L97.54947916666667,58.5C101.71614583333333,58.5,110.04947916666667,58.5,117.49947916666667,58.5
C124.94947916666666,58.5,131.51614583333333,58.5,134.79947916666666,58.5L138.0828125,58.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"

d="M211.58982035928145,41.75L218.22849613273453,37.583333333333336C224.86717190618765,33.416666666666664,238.14
452345309383,25.083333333333332,248.06653255988024,20.916666666666668C257.98854166666666,16.75,264.5552083333333
3,16.75,267.8385416666667,16.75L271.121875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M211.58982035928145,75.25L218.22849613273453,79.41666666666667C224.86717190618765,83.58333333333333,238.1445
2345309383,91.91666666666667,254.71757422654693,96.08333333333333C271.29062500000003,100.25,291.159375,100.25,301
.09375,100.25L311.028125,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"

d="M367.8236807634731,83.5L380.7410881362275,72.375C393.658495508982,61.25,419.493310254491,39,443.8594155439121,
27.875C468.22552083333335,16.75,491.1229166666667,16.75,502.5716145833333,16.75L514.0203125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-F" id="L-D-F-0"

d="M380.421875,100.25L391.2395833333333,100.25C402.0572916666667,100.25,423.6927083333333,100.25,441.39921875,100.
25C459.10572916666666,100.25,472.8833333333334,100.25,479.7721354166667,100.25L486.6609375,100.25"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-G" id="L-D-G-0"

d="M367.8236807634731,117L380.7410881362275,128.125C393.658495508982,139.25,419.493310254491,161.5,435.6940509605
788,172.625C451.89479166666666,183.75,458.4614583333334,183.75,461.7447916666667,183.75L465.028125,183.75"/></g><g

class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)"

```
class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g
transform="translate(46.69140625, 58.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="93.3828125" y="-16.75" x="-46.69140625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-39.19140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="78.3828125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">settings.py</span></div></foreignObject></g></g><g transform="translate(184.90234375, 58.5)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="83.0390625" y="-16.75" x="-41.51953125"
ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-34.01953125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="68.0390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">constants</span></div></foreignObject></g></g><g
transform="translate(348.375, 16.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"
width="143.90625" y="-16.75" x="-71.953125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.90625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LLM_MAX_TOKENS</span></div></foreignObject></g></g><g transform="translate(348.375, 100.25)"
id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="64.09375" y="-16.75" x="-32.046875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-24.546875, -9.25)" style=""
```

```

class="label"><rect/><foreignObject height="18.5" width="49.09375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">SIMPLE</span></div></foreignObject></g></g><g
transform="translate(541.98046875, 16.75)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"
width="45.3203125" y="-16.75" x="-22.66015625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.16015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="30.3203125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">stop</span></div></foreignObject></g></g><g transform="translate(541.98046875, 100.25)" id="flowchart-F-9"
class="node default default flowchart-label"><rect height="33.5" width="100.0390625" y="-16.75" x="-50.01953125" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-42.51953125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="85.0390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">max_tokens</span></div></foreignObject></g></g><g
transform="translate(541.98046875, 183.75)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5"
width="143.3046875" y="-16.75" x="-71.65234375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-64.15234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="128.3046875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">truncation_length</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-53.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-53.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 547.8671875 467" style="max-width:
547.867px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

```



```
ms",verdana,arial,sans-serif;font-size:16px;})#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
```

```
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,219.94301204819277L56.40625,217.66084337349398C66.015625,215.37867469879518,85.234375,210.81433734
939756,103.58444966935467,210.1446482902635C121.93452433870932,209.47495923112942,139.41592367741868,212.699918
4622588,148.15662334677333,214.31239807782353L156.897323016128,215.9248776933882"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-A" id="L-B-A-0"
d="M162.109375,234.11360573503538L152.5,235.8863381125295C142.890625,237.6590704900236,123.671875,241.2045352450
118,105.31255345040488,240.89920802749847C86.95323190080977,240.59388080998508,69.45333880161952,236.4377616199
7016,60.7033922520244,234.35970202496273L51.95344570242928,232.28164242995524"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M219.3939651946108,208.75L239.631689745509,176.75C259.86941429640723,144.75,300.3448633982036,80.75,333.920608
7824351,48.75C367.49635416666666,16.75,394.1723958333334,16.75,407.5104166666667,16.75L420.8484375,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-D" id="L-B-D-0"
d="M226.4560878243513,208.75L245.5167919369594,190.66666666666666C264.5774960495675,172.58333333333334,302.6989
0427478373,136.41666666666666,338.1236708873919,118.33333333333333C373.54843750000003,100.25,406.2765625,100.25,4
22.640625,100.25L439.0046875,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0"
d="M255.4921875,210.73425895789566L269.7135416666667,206.23688246491304C283.93489583333333,201.73950597193047,31
2.3776041666667,192.74475298596522,343.27421875,188.24737649298262C374.17083333333335,183.75,407.5213541666667,1
83.75,424.1966145833333,183.75L440.871875,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
```

```
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-F" id="L-B-F-0"

d="M255.4921875,240.26574104210434L269.7135416666667,244.76311753508696C283.9348958333333,249.26049402806953,31

2.3776041666667,258.25524701403475,343.295703125,262.7526235070174C374.21380208333335,267.25,407.6072916666667,2

67.25,424.3040364583333,267.25L441.00078125,267.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-G" id="L-B-G-0"

d="M226.4560878243513,242.25L245.5167919369594,260.3333333333333C264.5774960495675,278.4166666666667,302.698904

27478373,314.5833333333333,337.1230198457252,332.6666666666667C371.54713541666666,350.75,402.2739583333334,350.7

5,417.6373697916667,350.75L433.00078125,350.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-H" id="L-B-H-0"

d="M219.3939651946108,242.25L239.631689745509,274.25C259.86941429640723,306.25,300.3448633982036,370.25,336.78649

41991018,402.25C373.22812500000003,434.25,405.6359375,434.25,421.83984375,434.25L438.04375,434.25"/></g><g

class="edgeLabels"><g transform="translate(104.453125, 206.25)" class="edgeLabel"><g transform="translate(-28.296875, -9.25)"

class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Request</span></div></foreignObject></g></g><g

transform="translate(104.453125, 244.75)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"

class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Response</span></div></foreignObject></g></g><g

transform="translate(340.8203125, 16.75)" class="edgeLabel"><g transform="translate(-60.328125, -9.25)"

class="label"><foreignObject height="18.5" width="120.65625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Import constants</span></div></foreignObject></g></g><g

transform="translate(340.8203125, 100.25)" class="edgeLabel"><g transform="translate(-42.40234375, -9.25)"

class="label"><foreignObject height="18.5" width="84.8046875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Use Options</span></div></foreignObject></g></g><g

transform="translate(340.8203125, 183.75)" class="edgeLabel"><g transform="translate(-40.53515625, -9.25)"

class="label"><foreignObject height="18.5" width="81.0703125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Use Stream</span></div></foreignObject></g></g><g
```

```
transform="translate(340.8203125, 267.25)" class="edgeLabel"><g transform="translate(-40.40625, -9.25)"
class="label"><foreignObject height="18.5" width="80.8125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Use System</span></div></foreignObject></g></g><g
transform="translate(340.8203125, 350.75)" class="edgeLabel"><g transform="translate(-48.26171875, -9.25)"
class="label"><foreignObject height="18.5" width="96.5234375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Use Template</span></div></foreignObject></g></g><g
transform="translate(340.8203125, 434.25)" class="edgeLabel"><g transform="translate(-43.36328125, -9.25)"
class="label"><foreignObject height="18.5" width="86.7265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Use Context</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(23.3984375, 225.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(208.80078125, 225.5)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="93.3828125" y="-16.75" x="-46.69140625" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-39.19140625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="78.3828125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">settings.py</span></div></foreignObject></g></g><g
transform="translate(479.0078125, 16.75)" id="flowchart-C-5" class="node default default flowchart-label"><rect height="33.5"
width="105.71875" y="-16.75" x="-52.859375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-45.359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="90.71875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">constants.py</span></div></foreignObject></g></g><g transform="translate(479.0078125, 100.25)"
id="flowchart-D-7" class="node default default flowchart-label"><rect height="33.5" width="69.40625" y="-16.75" x="-34.703125"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.203125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="54.40625"><div style="display: inline-block; white-space: nowrap;"
```



```

ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFf;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

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cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M159.6640625,33.5L159.6640625,39.208333333333336C159.6640625,44.916666666666664,159.6640625,56.33333333333333
6,159.6640625,66.866666666666666C159.6640625,77.39999999999999,159.6640625,87.05,159.6640625,91.875L159.6640625,96.7
"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-B LE-C" id="L-B-C-0"
d="M159.6640625,135.5L159.6640625,139.66666666666666C159.6640625,143.83333333333334,159.6640625,152.166666666666
66,159.73007890047458,159.70016975753654C159.79609530094913,167.23367284840646,159.9281281018983,173.9673456968
129,159.99414450237285,177.33418212101614L160.06016090284743,180.70101854521937"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"
d="M160.1640625,438.65625L160.08072916666666,444.28125C159.99739583333334,449.90625,159.83072916666666,461.15625,
159.74739583333334,471.60625C159.6640625,482.05625000000003,159.6640625,491.70625,159.6640625,496.53125L159.66406
25,501.35625"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"
d="M159.6640625,540.15625L159.6640625,545.8645833333334C159.6640625,551.5729166666666,159.6640625,562.9895833333
334,159.7346873166443,573.606341423446C159.8053121332886,584.2230995135587,159.94656176657722,594.0399490271176,
160.01718658322153,598.948373783897L160.08781139986584,603.8567985406763"/><path
```

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"

d="M160.1640625,928.484375L160.08072916666666,934.109375C159.99739583333334,939.734375,159.83072916666666,950.984375,159.74739583333334,961.4343749999999C159.6640625,971.884375,159.6640625,981.5343750000001,159.6640625,986.359375L159.6640625,991.184375"/></g><g class="edgeLabels"><g transform="translate(159.6640625, 67.75)" class="edgeLabel"><g transform="translate(-18.59765625, -9.25)" class="label"><foreignObject height="18.5" width="37.1953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Input</div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g transform="translate(159.6640625, 472.40625)" class="edgeLabel"><g transform="translate(-25.7578125, -9.25)" class="label"><foreignObject height="18.5" width="51.515625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Prompt</div></foreignObject></g></g><g transform="translate(159.6640625, 574.40625)" class="edgeLabel"><g transform="translate(-42.15625, -9.25)" class="label"><foreignObject height="18.5" width="84.3125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Raw Output</div></foreignObject></g></g><g transform="translate(159.6640625, 962.234375)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)" class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Response</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(159.6640625, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g transform="translate(159.6640625, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="222.609375" y="-16.75" x="-111.3046875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-103.8046875, -9.25)" style="" class="label"><rect/><foreignObject

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-55.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 530.703125 300" style="max-width:
530.703px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
```

```
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-User LE-StorageConnector" id="L-User-StorageConnector-0"
d="M46.796875,142L53.634765625,142C60.47265625,142,74.1484375,142,86.94088541666667,142C99.73333333333333,142,111
.64244791666665,142,117.59700520833333,142L123.5515625,142"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-StorageConnector LE-Passage"
id="L-StorageConnector-Passage-0"
d="M217.1972071482036,125.25L235.683219498503,107.16666666666667C254.16923184880238,89.08333333333333,291.14125
65494012,52.916666666666664,323.21984702470064,34.833333333333336C355.29843750000003,16.75,382.48359375,16.75,396
.076171875,16.75L409.66875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-StorageConnector LE-LocalStorage"
id="L-StorageConnector-LocalStorage-0"
d="M251.44318394461078,125.25L264.221533495509,121.08333333333333C276.9998830464072,116.91666666666667,302.5565
8214820363,108.58333333333333,325.84027024076846,104.41666666666667C349.12395833333335,100.25,370.13463541666667,
100.25,380.6399739583333,100.25L391.1453125,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-StorageConnector LE-PostgresStorage"
```

```
id="L-StorageConnector-PostgresStorage-0"

d="M251.44318394461078,158.75L264.221533495509,162.91666666666666C276.9998830464072,167.08333333333334,302.5565

8214820363,175.41666666666666,324.06553065743515,179.58333333333334C345.57447916666666,183.75,363.03567708333334,

183.75,371.7662760416667,183.75L380.496875,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-StorageConnector LE-LanceDBStorage"

id="L-StorageConnector-LanceDBStorage-0"

d="M217.1972071482036,158.75L235.683219498503,176.83333333333334C254.16923184880238,194.91666666666666,291.1412

565494012,231.08333333333334,318.2133660803396,249.16666666666666C345.28541666666666,267.25,362.45755208333334,2

67.25,371.0436197916667,267.25L379.6296875,267.25"/></g><g class="edgeLabels"><g transform="translate(87.82421875, 142)"

class="edgeLabel"><g transform="translate(-16.02734375, -9.25)" class="label"><foreignObject height="18.5"

width="32.0546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Uses</span></div></foreignObject></g></g><g transform="translate(328.11328125, 16.75)"

class="edgeLabel"><g transform="translate(-27.234375, -9.25)" class="label"><foreignObject height="18.5" width="54.46875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Creates</span></div></foreignObject></g></g><g transform="translate(328.11328125, 100.25)"

class="edgeLabel"><g transform="translate(-31.81640625, -9.25)" class="label"><foreignObject height="18.5"

width="63.6328125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Interacts</span></div></foreignObject></g></g><g transform="translate(328.11328125, 183.75)"

class="edgeLabel"><g transform="translate(-31.81640625, -9.25)" class="label"><foreignObject height="18.5"

width="63.6328125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Interacts</span></div></foreignObject></g></g><g transform="translate(328.11328125, 267.25)"

class="edgeLabel"><g transform="translate(-31.81640625, -9.25)" class="label"><foreignObject height="18.5"

width="63.6328125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Interacts</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(23.3984375,

142)" id="flowchart-User-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75"

x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style=""
```

```
class="label"><rect><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">User</span></div></foreignObject></g></g><g
transform="translate(200.07421875, 142)" id="flowchart-StorageConnector-1" class="node default default flowchart-label"><rect
height="33.5" width="142.4453125" y="-16.75" x="-71.22265625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-63.72265625, -9.25)" style="" class="label"><rect><foreignObject height="18.5" width="127.4453125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">StorageConnector</span></div></foreignObject></g></g><g transform="translate(449.81640625, 16.75)"
id="flowchart-Passage-3" class="node default default flowchart-label"><rect height="33.5" width="69.6953125" y="-16.75"
x="-34.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.34765625, -9.25)" style=""
class="label"><rect><foreignObject height="18.5" width="54.6953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Passage</span></div></foreignObject></g></g><g
transform="translate(449.81640625, 100.25)" id="flowchart-LocalStorage-5" class="node default default flowchart-label"><rect
height="33.5" width="106.7421875" y="-16.75" x="-53.37109375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-45.87109375, -9.25)" style="" class="label"><rect><foreignObject height="18.5" width="91.7421875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LocalStorage</span></div></foreignObject></g></g><g transform="translate(449.81640625, 183.75)"
id="flowchart-PostgresStorage-7" class="node default default flowchart-label"><rect height="33.5" width="128.0390625" y="-16.75"
x="-64.01953125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-56.51953125, -9.25)" style=""
class="label"><rect><foreignObject height="18.5" width="113.0390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">PostgresStorage</span></div></foreignObject></g></g><g
transform="translate(449.81640625, 267.25)" id="flowchart-LanceDBStorage-9" class="node default default flowchart-label"><rect
height="33.5" width="129.7734375" y="-16.75" x="-64.88671875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-57.38671875, -9.25)" style="" class="label"><rect><foreignObject height="18.5" width="114.7734375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">LanceDBStorage</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-56.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-56.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1388.6875 300" style="max-width:
1388.69px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
```

```
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,136.44301204819277L56.40625,134.16084337349398C66.015625,131.87867469879518,85.234375,127.31433734
939759,103.57613523928883,126.08437647114886C121.91789547857768,124.85441559290017,139.38266595715535,126.95883
118580032,148.11505119644417,128.0110389822504L156.84743643573302,129.0632467787005"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-A" id="L-B-A-0"
d="M162.109375,154.30271651425497L152.5,155.46059709521248C142.890625,156.61847767617,123.671875,158.93423883808
498,105.31255345040488,158.01405982403503C86.95323190080977,157.09388080998508,69.45333880161952,152.9377616199
7016,60.7033922520244,150.8597020249627L51.95344570242928,148.78164242995524"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M366.3125,142L370.4791666666667,142C374.6458333333333,142,382.9791666666667,142,390.51266975753657,142.066016
40047458C398.04617284840646,142.13203280094913,404.77984569681286,142.2640656018983,408.1466821210161,142.33008
```

200237285L411.51351854521937,142.39609840284743"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0" d="M497.2525240095587,123.29158650955874L525.3386918829656,105.53465542463228C553.4248597563725,87.77772433970 581,609.5971955031863,52.26386216985291,692.6750300432599,34.50693108492646C775.7528645833332,16.75,885.73619791 66667,16.75,940.7278645833334,16.75L995.71953125,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-E" id="L-C-E-0" d="M507.84325212601544,133.88231462601547L534.1642986466795,128.2769288550129C560.4853451673436,122.6715430840 1031,613.1274382086718,111.46077154200516,663.5332503543359,105.85538577100259C713.9390625,100.25,762.1085937500 001,100.25,786.193359375,100.25L810.278125,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-F" id="L-C-F-0" d="M507.84325212601544,151.11768537398453L534.1642986466795,156.55640447832045C560.4853451673436,161.995123582 65636,613.1274382086718,172.87256179132817,685.3535628543359,178.31128089566405C757.5796875,183.75,849.389843750 0001,183.75,895.294921875,183.75L941.2,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-G" id="L-C-G-0" d="M497.2525240095587,161.70841349044127L525.3386918829656,179.29867790870105C553.4248597563725,196.8889423269 6086,609.5971955031863,232.06947116348042,703.9595352515931,249.6597355817402C798.321875,267.25,930.874218750000 1,267.25,997.150390625,267.25L1063.4265625,267.25"/></g><g class="edgeLabels"><g transform="translate(104.453125, 122.75)" class="edgeLabel"><g transform="translate(-28.296875, -9.25)" class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Request</div></foreignObject></g></g><g transform="translate(104.453125, 161.25)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)" class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Response</div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g transform="translate(665.76953125, 16.75)" class="edgeLabel"><g transform="translate(-25.72265625, -9.25)"


```
class="label"><foreignObject height="18.5" width="51.4453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">startup</span></div></foreignObject></g></g><g
transform="translate(665.76953125, 100.25)" class="edgeLabel"><g transform="translate(-100.578125, -9.25)"
class="label"><foreignObject height="18.5" width="201.15625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">startup_with_send_message</span></div></foreignObject></g></g><g transform="translate(665.76953125,
183.75)" class="edgeLabel"><g transform="translate(-124.80859375, -9.25)" class="label"><foreignObject height="18.5"
width="249.6171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">startup_with_send_message_gpt35</span></div></foreignObject></g></g><g
transform="translate(665.76953125, 267.25)" class="edgeLabel"><g transform="translate(-14.32421875, -9.25)"
class="label"><foreignObject height="18.5" width="28.6484375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">else</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(23.3984375, 142)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(264.2109375, 142)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="204.203125" y="-16.75" x="-102.1015625" ry="5" rx="5"
style="" class="basic label-container"/><g transform="translate(-94.6015625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="189.203125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">get_initial_boot_messages</span></div></foreignObject></g></g><g transform="translate(466.13671875, 142)"
id="flowchart-C-5" class="node default default flowchart-label"><polygon style="" transform="translate(-49.82421875,49.82421875)"
class="label-container" points="49.82421875,0 99.6484375,-49.82421875 49.82421875,-99.6484375 0,-49.82421875"/><g
transform="translate(-25.57421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="51.1484375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
```


.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 10 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2" refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0" d="M404.017578125,21.467840766582576L344.3857421875,27.63986730548548C284.75390625,33.811893844388386,165.490234375,46.1559469221942,105.8583984375,55.611306794430426C46.2265625,65.06666666666666,46.2265625,71.63333333333333 4,46.2265625,74.91666666666667L46.2265625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0" d="M404.017578125,23.329833606828604L363.4104817708333,29.191528005690504C322.8033854166667,35.0532224045524,241.58919270833334,46.7766112022762,200.98209635416666,55.92163893447144C160.375,65.06666666666666,160.375,71.63333333333334,160.375,74.91666666666667L160.375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0" d="M404.017578125,27.03556122071972L380.7776692708333,32.27963435059977C357.5377604166667,37.523707480479814,311.0579427083333,48.01185374023991,287.8180338541667,56.53926020345329C264.578125,65.06666666666666,264.578125,71.63333333333334,264.578125,74.91666666666667L264.578125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0" d="M426.6428003368263,33.5L420.9321513223553,37.666666666666664C415.22150230788424,41.833333333333336,403.80020427894215,50.166666666666664,398.0895552644711,57.61666666666667C392.37890625,65.06666666666666,392.37890625,71.63333333333334,392.37890625,74.91666666666667L392.37890625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0" d="M472.5564184131737,33.5L478.2670674276447,37.666666666666664C483.97771644211576,41.833333333333336,495.39901

447105785,50.166666666666664,501.1096634855289,57.61666666666667C506.8203125,65.06666666666666,506.8203125,71.63

333333333334,506.8203125,74.91666666666667L506.8203125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-G" id="L-A-G-0"

d="M495.181640625,26.039985030939235L521.7262369791666,31.4499875257827C548.2708333333334,36.85999002062616,601

.3600260416666,47.679995010313085,627.9046223958334,56.37333083848987C654.44921875,65.06666666666666,654.4492187

5,71.63333333333334,654.44921875,74.91666666666667L654.44921875,78.2"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A

LE-H" id="L-A-H-0"

d="M495.181640625,21.255280412075592L557.9853515625,27.46273367672966C620.7890625,33.670186941383726,746.396484

375,46.08509347069187,809.2001953125,55.57588006867926C872.00390625,65.06666666666666,872.00390625,71.6333333333

3334,872.00390625,74.91666666666667L872.00390625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-I" id="L-A-I-0"

d="M495.181640625,19.789418232862825L591.9384765625,26.241181860719024C688.6953125,32.69294548857522,882.208984

375,45.59647274428761,978.9658203125,55.331569705477136C1075.72265625,65.06666666666666,1075.72265625,71.6333333

3333334,1075.72265625,74.91666666666667L1075.72265625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-J" id="L-I-J-0"

d="M1075.72265625,117L1075.72265625,121.16666666666667C1075.72265625,125.33333333333333,1075.72265625,133.666666

6666666,1075.72265625,141.11666666666667C1075.72265625,148.56666666666666,1075.72265625,155.13333333333333,1075

.72265625,158.41666666666666L1075.72265625,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J LE-K" id="L-J-K-0"

d="M1075.72265625,200.5L1075.72265625,204.66666666666666C1075.72265625,208.83333333333334,1075.72265625,217.1666

666666666,1075.72265625,224.61666666666667C1075.72265625,232.06666666666667,1075.72265625,238.63333333333333,107

5.72265625,241.91666666666666L1075.72265625,245.2"/></g><g class="edgeLabels"><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g
transform="translate(449.599609375, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="91.1640625" y="-16.75" x="-45.58203125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-38.08203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="76.1640625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">test_cli.py</div></foreignObject></g></g><g transform="translate(46.2265625, 100.25)"
id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="92.453125" y="-16.75" x="-46.2265625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.7265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="77.453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">subprocess</div></foreignObject></g></g><g

transform="translate(160.375, 100.25)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5"

width="35.84375" y="-16.75" x="-17.921875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-10.421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="20.84375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">sys</div></foreignObject></g></g><g transform="translate(264.578125, 100.25)" id="flowchart-D-3"

class="node default default flowchart-label"><rect height="33.5" width="72.5625" y="-16.75" x="-36.28125" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-28.78125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="57.5625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">pexpect</div></foreignObject></g></g><g transform="translate(392.37890625, 100.25)"

id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5" width="83.0390625" y="-16.75" x="-41.51953125"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-34.01953125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="68.0390625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">constants</div></foreignObject></g></g><g

transform="translate(506.8203125, 100.25)" id="flowchart-F-5" class="node default default flowchart-label"><rect height="33.5"

width="45.84375" y="-16.75" x="-22.921875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-15.421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="30.84375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">utils</div></foreignObject></g></g><g transform="translate(654.44921875, 100.25)" id="flowchart-G-6"

class="node default default flowchart-label"><rect height="33.5" width="149.4140625" y="-16.75" x="-74.70703125" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-67.20703125, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="134.4140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">configure_memgpt</div></foreignObject></g></g><g

transform="translate(872.00390625, 100.25)" id="flowchart-H-7" class="node default default flowchart-label"><rect height="33.5"

width="185.6953125" y="-16.75" x="-92.84765625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-85.34765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="170.6953125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span


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ms",verdana,arial,sans-serif;font-size:16px;})#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
```

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10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M134.14453125,33.5L134.14453125,39.208333333333336C134.14453125,44.916666666666664,134.14453125,56.3333333333
33336,190.26755082716394,68.98238592896239C246.39057040432792,81.63143852459145,358.63660955865583,95.512877049
18288,414.75962913581975,102.45359631147859L470.8826487129837,109.39431557377432"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-B" id="L-C-B-0"
d="M422.34375,33.5L422.34375,39.208333333333336C422.34375,44.916666666666664,422.34375,56.333333333333336,435.426
92449951693,67.41444094568507C448.5100989990338,78.49554855803682,474.67644799806766,89.24109711607362,487.7596
224975846,94.61387139509203L500.84279699710146,99.98664567411045"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-B" id="L-D-B-0"
d="M670.72265625,33.5L670.72265625,39.208333333333336C670.72265625,44.916666666666664,670.72265625,56.3333333333
33336,657.639481750483,67.41444094568507C644.5563072509661,78.49554855803682,618.3899582519324,89.2410971160736
2,605.3067837524154,94.61387139509203L592.2236092528985,99.98664567411045"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-B" id="L-E-B-0"
d="M923.76953125,33.5L923.76953125,39.208333333333336C923.76953125,44.916666666666664,923.76953125,56.3333333333
33336,873.5039505632882,68.83725983703825C823.2383698765765,81.34118634074316,722.7072085031529,94.932372681486
31,672.441627816441,101.7279658518579L622.1760471297292,108.52355902222948"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-F" id="L-B-F-0"
d="M546.533203125,135.5L546.533203125,139.66666666666666C546.533203125,143.83333333333334,546.533203125,152.1666
6666666666,546.5992195254745,159.70016975753654C546.6652359259491,167.23367284840646,546.7972687268983,173.9673
```

456968129,546.8632851273728,177.33418212101614L546.9293015278474,180.70101854521937"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-G" id="L-F-G-0"
d="M511.881515881527,258.738937756527L490.16330750543915,270.2225522971058C468.4450991293513,281.7061668376846
3,425.0086823771756,304.67339591884235,403.29047400108783,320.98201045942113C381.572265625,337.29062500000003,38
1.572265625,346.940625,381.572265625,351.765625L381.572265625,356.590625"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F
LE-H" id="L-F-H-0"
d="M582.184890368473,258.738937756527L603.7364320778942,270.2225522971058C625.2879737873153,281.70616683768463,
668.3910572061577,304.67339591884235,689.9425989155789,320.98201045942113C711.494140625,337.29062500000003,711.4
94140625,346.940625,711.494140625,351.765625L711.494140625,356.590625"/></g><g class="edgeLabels"><g
transform="translate(134.14453125, 67.75)" class="edgeLabel"><g transform="translate(-39.9375, -9.25)"
class="label"><foreignObject height="18.5" width="79.875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">parse JSON</div></foreignObject></g></g><g
transform="translate(422.34375, 67.75)" class="edgeLabel"><g transform="translate(-39.9375, -9.25)" class="label"><foreignObject
height="18.5" width="79.875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">parse JSON</div></foreignObject></g></g><g transform="translate(670.72265625, 67.75)"
class="edgeLabel"><g transform="translate(-39.9375, -9.25)" class="label"><foreignObject height="18.5" width="79.875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">parse
JSON</div></foreignObject></g></g><g transform="translate(923.76953125, 67.75)" class="edgeLabel"><g
transform="translate(-39.9375, -9.25)" class="label"><foreignObject height="18.5" width="79.875"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">parse
JSON</div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject
height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></div></foreignObject></g></g><g transform="translate(381.572265625, 327.640625)"
class="edgeLabel"><g transform="translate(-78.40625, -9.25)" class="label"><foreignObject height="18.5" width="156.8125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">JSON parse
successful</div></foreignObject></g></g><g transform="translate(711.494140625, 327.640625)" class="edgeLabel"><g
transform="translate(-62.96875, -9.25)" class="label"><foreignObject height="18.5" width="125.9375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">JSON parse
failed</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(134.14453125, 16.75)"
id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="268.2890625" y="-16.75"
x="-134.14453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-126.64453125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="253.2890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">EXAMPLE_MISSING_CLOSING_BRACE</div></foreignObject></g></g><g
transform="translate(546.533203125, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="140.78125" y="-16.75" x="-70.390625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-62.890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="125.78125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">test_json_parsers</div></foreignObject></g></g><g transform="translate(422.34375, 16.75)"
id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5" width="208.109375" y="-16.75" x="-104.0546875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-96.5546875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="193.109375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">EXAMPLE_BAD_TOKEN_END</div></foreignObject></g></g><g transform="translate(670.72265625,
16.75)" id="flowchart-D-4" class="node default default flowchart-label"><rect height="33.5" width="188.6484375" y="-16.75"
x="-94.32421875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-86.82421875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="173.6484375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">EXAMPLE_DOUBLE_JSON</div></foreignObject></g></g><g transform="translate(923.76953125,
16.75)" id="flowchart-E-6" class="node default default flowchart-label"><rect height="33.5" width="217.4453125" y="-16.75"

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x="-108.72265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-101.22265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="202.4453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">EXAMPLE_HARD_LINE_FEEDS</span></div></foreignObject></g></g><g
transform="translate(546.533203125, 239.4453125)" id="flowchart-F-9" class="node default default flowchart-label"><polygon style=""
transform="translate(-53.9453125,53.9453125)" class="label-container" points="53.9453125,0 107.890625,-53.9453125
53.9453125,-107.890625 0,-53.9453125"/><g transform="translate(-29.6953125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="59.390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Decision</span></div></foreignObject></g></g><g
transform="translate(381.572265625, 378.640625)" id="flowchart-G-11" class="node default default flowchart-label"><rect
height="33.5" width="253.8984375" y="-16.75" x="-126.94921875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-119.44921875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="238.8984375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Output: JSON
parsed successfully</span></div></foreignObject></g></g><g transform="translate(711.494140625, 378.640625)"
id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5" width="305.9453125" y="-16.75"
x="-152.97265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-145.47265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="290.9453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Output: Failed to repair test JSON
string</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-59.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-59.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1163.345703125 608.1796875"
style="max-width: 1163.35px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg

```

.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg

.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg

.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg

.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg

p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node

path{fill:#ECECF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

```
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M765.205078125,33.5L765.205078125,39.208333333333336C765.205078125,44.916666666666664,765.205078125,56.333333
333333336,765.205078125,66.866666666666666C765.205078125,77.39999999999999,765.205078125,87.05,765.205078125,91.87
5L765.205078125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"
d="M732.185546875,122.82132639229371L681.2548828125,129.10110532691144C630.32421875,135.38088426152913,528.4628
90625,147.94044213076458,477.59824296297455,157.5870574895855C426.73359530094916,167.23367284840646,426.8656281
0189827,173.9673456968129,426.9316445023728,177.33418212101614L426.99766090284743,180.70101854521937"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"
d="M354.7973389534392,316.3754639534392L310.49062100286596,334.05116787786596C266.1839030522928,351.7268718022
928,177.5704671511464,387.0782796511464,133.2637492005732,409.57898357557315C88.95703125,432.07968750000003,88.9
5703125,441.7296875,88.95703125,446.5546875L88.95703125,451.3796875"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-E" id="L-D-E-0"
d="M88.95703125,490.1796875L88.95703125,495.8880208333333C88.95703125,501.5963541666667,88.95703125,513.01302083
33334,88.95703125,523.5463541666667C88.95703125,534.0796875,88.95703125,543.7296875000001,88.95703125,548.5546875
L88.95703125,553.3796875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
```

edge-pattern-solid flowchart-link LS-C LE-F" id="L-C-F-0"

d="M381.3839783032368,342.9621033032368L370.3460235860307,356.206700669364C359.3080688688245,369.4512980354911
6,337.23215943441227,395.9404927677456,326.1942047172061,414.0100901338728C315.15625,432.07968750000003,315.1562
5,441.7296875,315.15625,446.5546875L315.15625,451.3796875"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-G" id="L-F-G-0"

d="M315.15625,490.1796875L315.15625,495.8880208333333C315.15625,501.5963541666667,315.15625,513.0130208333334,315
.15625,523.5463541666667C315.15625,534.0796875,315.15625,543.7296875000001,315.15625,548.5546875L315.15625,553.379
6875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-C LE-H" id="L-C-H-0"

d="M472.8191466967632,342.9621033032368L483.6904347473026,356.206700669364C494.56172279784215,369.451298035491
16,516.304298898921,395.9404927677456,527.1755869494606,414.0100901338728C538.046875,432.07968750000003,538.0468
75,441.7296875,538.046875,446.5546875L538.046875,451.3796875"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H LE-I" id="L-H-I-0"

d="M538.046875,490.1796875L538.046875,495.8880208333333C538.046875,501.5963541666667,538.046875,513.013020833333
4,538.046875,523.5463541666667C538.046875,534.0796875,538.046875,543.7296875000001,538.046875,548.5546875L538.0468
75,553.3796875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-C LE-J" id="L-C-J-0"

d="M500.62367844493366,315.15757155506634L548.0138726624447,333.03625754588865C595.4040668799557,350.914943536
71095,690.184455314978,386.67231551835545,737.5746495324889,409.37600150917774C784.96484375,432.07968750000003,7
84.96484375,441.7296875,784.96484375,446.5546875L784.96484375,451.3796875"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J
LE-K" id="L-J-K-0"

d="M784.96484375,490.1796875L784.96484375,495.8880208333333C784.96484375,501.5963541666667,784.96484375,513.0130
208333334,784.96484375,523.5463541666667C784.96484375,534.0796875,784.96484375,543.7296875000001,784.96484375,548
.5546875L784.96484375,553.3796875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-L" id="L-B-L-0"

d="M765.205078125,135.5L765.205078125,139.66666666666666C765.205078125,143.83333333333334,765.205078125,152.16666666666666,765.205078125,173.71497395833333C765.205078125,195.26328125,765.205078125,230.02656249999998,765.205078125,247.408203125L765.205078125,264.78984375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-M" id="L-B-M-0"

d="M798.224609375,123.8319761246472L837.9322916666666,129.943313437206C877.6399739583334,136.05465074976482,957.0553385416666,148.2773253748824,996.7630208333334,171.7703033124412C1036.470703125,195.26328125,1036.470703125,230.02656249999998,1036.470703125,247.408203125L1036.470703125,264.78984375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-M LE-N" id="L-M-N-0"

d="M1036.470703125,303.58984375L1036.470703125,323.396484375C1036.470703125,343.203125,1036.470703125,382.81640625,1036.470703125,407.448046875C1036.470703125,432.07968750000003,1036.470703125,441.7296875,1036.470703125,446.5546875L1036.470703125,451.3796875"/></g><g class="edgeLabels"><g transform="translate(765.205078125, 67.75)" class="edgeLabel"><g transform="translate(-96.2109375, -9.25)" class="label"><foreignObject height="18.5" width="192.421875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Runs test_load_archival.py</div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g transform="translate(88.95703125, 422.4296875)" class="edgeLabel"><g transform="translate(-29.515625, -9.25)" class="label"><foreignObject height="18.5" width="59.03125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Postgres</div></foreignObject></g></g><g transform="translate(88.95703125, 524.4296875)" class="edgeLabel"><g transform="translate(-55.79296875, -9.25)" class="label"><foreignObject height="18.5" width="111.5859375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Loads Directory</div></foreignObject></g></g><g transform="translate(315.15625, 422.4296875)" class="edgeLabel"><g transform="translate(-29.86328125, -9.25)" class="label"><foreignObject height="18.5" width="59.7265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Lancedb</div></foreignObject></g></g></p></div>

transform="translate(315.15625, 524.4296875)" class="edgeLabel"><g transform="translate(-55.79296875, -9.25)"

class="label"><foreignObject height="18.5" width="111.5859375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Loads Directory</div></foreignObject></g></g><g

transform="translate(538.046875, 422.4296875)" class="edgeLabel"><g transform="translate(-27.40234375, -9.25)"

class="label"><foreignObject height="18.5" width="54.8046875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Chroma</div></foreignObject></g></g><g

transform="translate(538.046875, 524.4296875)" class="edgeLabel"><g transform="translate(-55.79296875, -9.25)"

class="label"><foreignObject height="18.5" width="111.5859375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Loads Directory</div></foreignObject></g></g><g

transform="translate(784.96484375, 422.4296875)" class="edgeLabel"><g transform="translate(-26.33203125, -9.25)"

class="label"><foreignObject height="18.5" width="52.6640625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Default</div></foreignObject></g></g><g

transform="translate(784.96484375, 524.4296875)" class="edgeLabel"><g transform="translate(-55.79296875, -9.25)"

class="label"><foreignObject height="18.5" width="111.5859375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Loads Directory</div></foreignObject></g></g><g

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g

transform="translate(1036.470703125, 422.4296875)" class="edgeLabel"><g transform="translate(-55.3984375, -9.25)"

class="label"><foreignObject height="18.5" width="110.796875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Loads Database</div></foreignObject></g></g></g><g

class="nodes"><g transform="translate(765.205078125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect

height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">User</div></foreignObject></g></g><g transform="translate(765.205078125, 118.75)" id="flowchart-B-1"

class="node default default flowchart-label"><rect height="33.5" width="66.0390625" y="-16.75" x="-33.01953125" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-25.51953125, -9.25)" style="" class="label"><rect/></foreignObject

height="18.5" width="51.0390625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Module</div></foreignObject></g></g><g

transform="translate(426.6015625, 286.83984375)" id="flowchart-C-3" class="node default default flowchart-label"><polygon style=""

transform="translate(-101.33984375,101.33984375)" class="label-container" points="101.33984375,0 202.6796875,-101.33984375

101.33984375,-202.6796875 0,-101.33984375"/><g transform="translate(-77.08984375, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="154.1796875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Archival Storage Type</div></foreignObject></g></g><g

transform="translate(88.95703125, 473.4296875)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"

width="177.9140625" y="-16.75" x="-88.95703125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-81.45703125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="162.9140625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">test_postgres

Function</div></foreignObject></g></g><g transform="translate(88.95703125, 575.4296875)" id="flowchart-E-7" class="node

default default flowchart-label"><rect height="33.5" width="144.34375" y="-16.75" x="-72.171875" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-64.671875, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"

width="129.34375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Postgres Database</div></foreignObject></g></g><g transform="translate(315.15625, 473.4296875)"

id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="174.484375" y="-16.75" x="-87.2421875"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-79.7421875, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="159.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">test_lancedb Function</div></foreignObject></g></g><g

transform="translate(315.15625, 575.4296875)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5"

width="145.0390625" y="-16.75" x="-72.51953125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-65.01953125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="130.0390625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Lancedb
Database</div></foreignObject></g></g><g transform="translate(538.046875, 473.4296875)" id="flowchart-H-13"
class="node default default flowchart-label"><rect height="33.5" width="171.296875" y="-16.75" x="-85.6484375" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-78.1484375, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="156.296875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">test_chroma Function</div></foreignObject></g></g><g
transform="translate(538.046875, 575.4296875)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5"
width="140.1171875" y="-16.75" x="-70.05859375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-62.55859375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="125.1171875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Chroma
Database</div></foreignObject></g></g><g transform="translate(784.96484375, 473.4296875)" id="flowchart-J-17"
class="node default default flowchart-label"><rect height="33.5" width="222.5390625" y="-16.75" x="-111.26953125" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-103.76953125, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="207.5390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">test_load_directory
Function</div></foreignObject></g></g><g transform="translate(784.96484375, 575.4296875)" id="flowchart-K-19"
class="node default default flowchart-label"><rect height="33.5" width="123.046875" y="-16.75" x="-61.5234375" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-54.0234375, -9.25)" style="" class="label"><rect/></foreignObject
height="18.5" width="108.046875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Local Database</div></foreignObject></g></g><g
transform="translate(765.205078125, 286.83984375)" id="flowchart-L-21" class="node default default flowchart-label"><rect
height="33.5" width="220.78125" y="-16.75" x="-110.390625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-102.890625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="205.78125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">test_load_webpage Function</div></foreignObject></g></g><g transform="translate(1036.470703125,
286.83984375)" id="flowchart-M-23" class="node default default flowchart-label"><rect height="33.5" width="221.75" y="-16.75"

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x="-110.875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-103.375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="206.75"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">test_load_database
Function</span></div></foreignObject></g></g><g transform="translate(1036.470703125, 473.4296875)" id="flowchart-N-25"
class="node default default flowchart-label"><rect height="33.5" width="111.328125" y="-16.75" x="-55.6640625" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-48.1640625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="96.328125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">SQL
Database</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-6.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-6.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 300.72265625 355.5" style="max-width:
300.723px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

```

```
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M126.7031920189951,33.5L120.69601939082925,39.208333333333336C114.68884676266339,44.916666666666664,102.6745
015063317,56.333333333333336,96.66732887816585,66.86666666666666C90.66015625,77.39999999999999,90.66015625,87.05,
```

90.66015625,91.875L90.66015625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M90.66015625,135.5L90.66015625,141.20833333333334C90.66015625,146.91666666666666,90.66015625,158.33333333333334,96.02699358800594,169.14151952048272C101.39383092601186,179.9497057076321,112.12750560202373,190.14941141526415,117.49434294002965,195.2492642690802L122.8611802780356,200.34911712289625"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M82.2078737745098,306L86.35096252042484,300.2916666666667C90.49405126633987,294.58333333333333,98.78022875816994,283.1666666666667,106.57303902504322,272.46323252326664C114.36584929191649,261.7597983798667,121.665292333833,251.7695967597334,125.31501385479123,246.77449594966671L128.96473537574948,241.77939513960004"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-D" id="L-E-D-0"

d="M230.7664675245098,306L234.90955627042482,300.2916666666667C239.05264501633988,294.58333333333333,247.33882250816995,283.1666666666667,239.82791665862442,272.1179843366735C232.31701080907885,261.06930200668035,209.0090216181577,250.38860401336072,197.35502702269716,245.0482550167009L185.70103242723658,239.7079060200411"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-A" id="L-D-A-0"

d="M161.95696423100492,204L167.96413685917076,198.29166666666666C173.9713094873366,192.58333333333334,185.9856547436683,181.16666666666666,191.99282737183412,166.95833333333334C198,152.75,198,135.75,198,118.75C198,101.75,198,84.75,192.63316266199408,71.15014714618395C187.26632532398813,57.550294292367916,176.53265064797628,47.35058858473584,171.16581330997033,42.2507357309198L165.7989759719644,37.15088287710376"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-C" id="L-D-C-0"

d="M107.77733417585785,237.5L95.32030452154821,243.20833333333334C82.86327486723856,248.91666666666666,57.94921555861928,260.33333333333333,49.11641343917852,271.03511481939444C40.28361131973775,281.7368963054555,47.532066389475496,291.72379261091095,51.156293924344375,296.7172407636387L54.780521459213254,301.71068891636645"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-E" id="L-D-E-0"

d="M156.56863702512254,237.5L160.73948918760212,243.20833333333334C164.9103413500817,248.91666666666666,173.252
04567504088,260.33333333333333,181.04712537238933,271.03511481939444C188.84220506973773,281.7368963054555,196.09
06601394755,291.72379261091095,199.71488767434437,296.7172407636387L203.33911520921325,301.71068891636645"/></g>

<g class="edgeLabels"><g transform="translate(90.66015625, 67.75)" class="edgeLabel"><g transform="translate(-18.59765625,
-9.25)" class="label"><foreignObject height="18.5" width="37.1953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Input</div></foreignObject></g></g><g
transform="translate(90.66015625, 169.75)" class="edgeLabel"><g transform="translate(-29.09765625, -9.25)"
class="label"><foreignObject height="18.5" width="58.1953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Message</div></foreignObject></g></g><g
transform="translate(107.06640625, 271.75)" class="edgeLabel"><g transform="translate(-29.09765625, -9.25)"
class="label"><foreignObject height="18.5" width="58.1953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Message</div></foreignObject></g></g><g
transform="translate(255.625, 271.75)" class="edgeLabel"><g transform="translate(-29.09765625, -9.25)"
class="label"><foreignObject height="18.5" width="58.1953125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Message</div></foreignObject></g></g><g
transform="translate(198, 118.75)" class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject
height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Output</div></foreignObject></g></g><g
transform="translate(33.03515625, 271.75)" class="edgeLabel"><g transform="translate(-24.93359375, -9.25)"
class="label"><foreignObject height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Output</div></foreignObject></g></g><g
transform="translate(181.59375, 271.75)" class="edgeLabel"><g transform="translate(-24.93359375, -9.25)"
class="label"><foreignObject height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Output</div></foreignObject></g></g></g></g>


```

class="nodes"><g transform="translate(144.330078125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(90.66015625, 118.75)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="94.8125" y="-16.75" x="-47.40625" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-39.90625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="79.8125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User_proxy</span></div></foreignObject></g></g><g transform="translate(144.330078125, 220.75)"
id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5" width="91.34375" y="-16.75" x="-45.671875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.171875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="76.34375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">GroupChat</span></div></foreignObject></g></g><g
transform="translate(70.05078125, 322.75)" id="flowchart-C-4" class="node default default flowchart-label"><rect height="33.5"
width="140.1015625" y="-16.75" x="-70.05078125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-62.55078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="125.1015625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Product_manager</span></div></foreignObject></g></g><g transform="translate(218.609375, 322.75)"
id="flowchart-E-6" class="node default default flowchart-label"><rect height="33.5" width="57.015625" y="-16.75" x="-28.5078125"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-21.0078125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="42.015625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Coder</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-60.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-60.svg):

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 5275.09375 49.5" style="max-width:

5275.09px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"

id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg

.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg

.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg

.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg

.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg

p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node

path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

```
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M134.3515625,16.75L142.32356770833334,16.75C150.29557291666666,16.75,166.23958333333334,16.75,181.300260416666
67,16.75C196.3609375,16.75,210.53828124999998,16.75,217.626953125,16.75L224.715625,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M422.8671875,16.75L431.01171875,16.75C439.15625,16.75,455.4453125,16.75,470.8510416666666,16.75C486.2567708333
335,16.75,500.7791666666667,16.75,508.0403645833333,16.75L515.3015625,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"
d="M785.390625,16.75L799.4615885416666,16.75C813.5325520833334,16.75,841.6744791666666,16.75,868.9330729166667,16.
75C896.1916666666666,16.75,922.5669270833333,16.75,935.7545572916666,16.75L948.9421875,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-E" id="L-D-E-0"
d="M1297.796875,16.75L1311.8678385416667,16.75C1325.9388020833333,16.75,1354.0807291666667,16.75,1381.33932291666
68,16.75C1408.5979166666666,16.75,1434.9731770833332,16.75,1448.1608072916667,16.75L1461.3484375,16.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
```

LE-F" id="L-E-F-0"

d="M1717.375,16.75L1731.4459635416667,16.75C1745.5169270833333,16.75,1773.6588541666667,16.75,1800.9174479166668,16.75C1828.1760416666666,16.75,1854.5513020833332,16.75,1867.7389322916667,16.75L1880.9265625,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F

LE-G" id="L-F-G-0"

d="M2385.09375,16.75L2399.1647135416665,16.75C2413.2356770833335,16.75,2441.3776041666665,16.75,2468.6361979166667,16.75C2495.8947916666666,16.75,2522.2700520833333,16.75,2535.4576822916665,16.75L2548.6453125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G

LE-H" id="L-G-H-0"

d="M2792.9765625,16.75L2808.7936197916665,16.75C2824.6106770833335,16.75,2856.2447916666665,16.75,2886.995572916667,16.75C2917.746354166667,16.75,2947.6138020833333,16.75,2962.5475260416665,16.75L2977.48125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H

LE-I" id="L-H-I-0"

d="M3062.390625,16.75L3073.1184895833335,16.75C3083.8463541666665,16.75,3105.3020833333335,16.75,3125.874479166667,16.75C3146.446875,16.75,3166.1359374999997,16.75,3175.98046875,16.75L3185.825,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I

LE-J" id="L-I-J-0"

d="M3331.0546875,16.75L3341.7141927083335,16.75C3352.3736979166665,16.75,3373.6927083333335,16.75,3394.128385416667,16.75C3414.5640625,16.75,3434.1164062499997,16.75,3443.892578125,16.75L3453.66875,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J

LE-K" id="L-J-K-0"

d="M3678.90625,16.75L3690.3346354166665,16.75C3701.7630208333335,16.75,3724.6197916666665,16.75,3746.593229166667,16.75C3768.5666666666667,16.75,3789.6567708333333,16.75,3800.2018229166665,16.75L3810.746875,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-L" id="L-K-L-0"

d="M3980.0703125,16.75L3992.599609375,16.75C4005.12890625,16.75,4030.1875,16.75,4054.362760416667,16.75C4078.53802

08333336,16.75,4101.829947916666,16.75,4113.475911458333,16.75L4125.121875,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-L

LE-M" id="L-L-M-0"

d="M4294.4453125,16.75L4304.856770833333,16.75C4315.268229166667,16.75,4336.091145833333,16.75,4356.030729166667,1

6.75C4375.970312500001,16.75,4395.0265625,16.75,4404.5546875,16.75L4414.0828125,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-M

LE-N" id="L-M-N-0"

d="M4493.5078125,16.75L4510.132161458333,16.75C4526.756510416667,16.75,4560.005208333333,16.75,4592.370572916667,1

6.75C4624.735937500001,16.75,4656.21796875,16.75,4671.958984375,16.75L4687.7,16.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-N

LE-O" id="L-N-O-0"

d="M4904.7421875,16.75L4919.16796875,16.75C4933.59375,16.75,4962.4453125,16.75,4990.413541666667,16.75C5018.381770

833334,16.75,5045.466666666666,16.75,5059.009114583333,16.75L5072.5515625,16.75"/></g><g class="edgeLabels"><g

transform="translate(182.18359375, 16.75)" class="edgeLabel"><g transform="translate(-22.83203125, -9.25)"

class="label"><foreignObject height="18.5" width="45.6640625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Spawn</div></foreignObject></g></g><g

transform="translate(471.734375, 16.75)" class="edgeLabel"><g transform="translate(-23.8671875, -9.25)"

class="label"><foreignObject height="18.5" width="47.734375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send Y</div></foreignObject></g></g><g

transform="translate(869.81640625, 16.75)" class="edgeLabel"><g transform="translate(-59.42578125, -9.25)"

class="label"><foreignObject height="18.5" width="118.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send Empty Line</div></foreignObject></g></g><g

transform="translate(1382.22265625, 16.75)" class="edgeLabel"><g transform="translate(-59.42578125, -9.25)"

class="label"><foreignObject height="18.5" width="118.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send Empty Line</div></foreignObject></g></g><g

transform="translate(1801.80078125, 16.75)" class="edgeLabel"><g transform="translate(-59.42578125, -9.25)"

class="label"><foreignObject height="18.5" width="118.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send Empty Line</div></foreignObject></g></g><g

transform="translate(2469.51953125, 16.75)" class="edgeLabel"><g transform="translate(-59.42578125, -9.25)"

class="label"><foreignObject height="18.5" width="118.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send Empty Line</div></foreignObject></g></g><g

transform="translate(2887.87890625, 16.75)" class="edgeLabel"><g transform="translate(-69.90234375, -9.25)"

class="label"><foreignObject height="18.5" width="139.8046875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Enter your message</div></foreignObject></g></g><g

transform="translate(3126.7578125, 16.75)" class="edgeLabel"><g transform="translate(-39.3671875, -9.25)"

class="label"><foreignObject height="18.5" width="78.734375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send /save</div></foreignObject></g></g><g

transform="translate(3395.01171875, 16.75)" class="edgeLabel"><g transform="translate(-38.95703125, -9.25)"

class="label"><foreignObject height="18.5" width="77.9140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send /load</div></foreignObject></g></g><g

transform="translate(3747.4765625, 16.75)" class="edgeLabel"><g transform="translate(-43.5703125, -9.25)"

class="label"><foreignObject height="18.5" width="87.140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send /dump</div></foreignObject></g></g><g

transform="translate(4055.24609375, 16.75)" class="edgeLabel"><g transform="translate(-50.17578125, -9.25)"

class="label"><foreignObject height="18.5" width="100.3515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send /dump 3</div></foreignObject></g></g><g

transform="translate(4356.9140625, 16.75)" class="edgeLabel"><g transform="translate(-37.46875, -9.25)"

class="label"><foreignObject height="18.5" width="74.9375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send /exit</div></foreignObject></g></g><g

transform="translate(4593.25390625, 16.75)" class="edgeLabel"><g transform="translate(-74.74609375, -9.25)"

class="label"><foreignObject height="18.5" width="149.4921875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Wait for child to exit</div></foreignObject></g></g><g

transform="translate(4991.296875, 16.75)" class="edgeLabel"><g transform="translate(-61.5546875, -9.25)"

class="label"><foreignObject height="18.5" width="123.109375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Check exit status</div></foreignObject></g></g></g><g

class="nodes"><g transform="translate(67.17578125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect

height="33.5" width="134.3515625" y="-16.75" x="-67.17578125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-59.67578125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="119.3515625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Start CLI

Process</div></foreignObject></g></g><g transform="translate(326.44140625, 16.75)" id="flowchart-B-1" class="node

default default flowchart-label"><rect height="33.5" width="192.8515625" y="-16.75" x="-96.42578125" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-88.92578125, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="177.8515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Continue with legacy

CLI</div></foreignObject></g></g><g transform="translate(652.99609375, 16.75)" id="flowchart-C-3" class="node default

default flowchart-label"><rect height="33.5" width="264.7890625" y="-16.75" x="-132.39453125" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-124.89453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="249.7890625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Which model would you like to use</div></foreignObject></g></g><g

transform="translate(1126.01953125, 16.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"

width="343.5546875" y="-16.75" x="-171.77734375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-164.27734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="328.5546875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Which persona

would you like MemGPT to use</div></foreignObject></g></g><g transform="translate(1592.01171875, 16.75)"

id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="250.7265625" y="-16.75"

x="-125.36328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-117.86328125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="235.7265625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Which user would you like to

use</div></foreignObject></g></g><g transform="translate(2135.66015625, 16.75)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="498.8671875" y="-16.75" x="-249.43359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-241.93359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="483.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Would you like to preload anything into MemGPT's archival memory</div></foreignObject></g></g><g transform="translate(2673.4609375, 16.75)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="239.03125" y="-16.75" x="-119.515625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-112.015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="224.03125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Testing messaging functionality</div></foreignObject></g></g><g transform="translate(3022.5859375, 16.75)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5" width="79.609375" y="-16.75" x="-39.8046875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-32.3046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="64.609375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Try again</div></foreignObject></g></g><g transform="translate(3261.08984375, 16.75)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5" width="139.9296875" y="-16.75" x="-69.96484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-62.46484375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="124.9296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Saved checkpoint</div></foreignObject></g></g><g transform="translate(3568.9375, 16.75)" id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="219.9375" y="-16.75" x="-109.96875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-102.46875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="204.9375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Loaded persistence manager</div></foreignObject></g></g><g transform="translate(3898.05859375, 16.75)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="33.5" width="164.0234375" y="-16.75" x="-82.01171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-74.51171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="149.0234375"><div style="display: inline-block; white-space: nowrap;"


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xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Just testing no-crash</span></div></foreignObject></g></g><g
transform="translate(4212.43359375, 16.75)" id="flowchart-L-21" class="node default default flowchart-label"><rect height="33.5"
width="164.0234375" y="-16.75" x="-82.01171875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-74.51171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="149.0234375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Just testing
no-crash</span></div></foreignObject></g></g><g transform="translate(4456.4453125, 16.75)" id="flowchart-M-23" class="node
default default flowchart-label"><rect height="33.5" width="74.125" y="-16.75" x="-37.0625" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-29.5625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="59.125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Finished</span></div></foreignObject></g></g><g transform="translate(4798.87109375, 16.75)"
id="flowchart-N-25" class="node default default flowchart-label"><rect height="33.5" width="211.7421875" y="-16.75"
x="-105.87109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-98.37109375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="196.7421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">CLI should have
terminated</span></div></foreignObject></g></g><g transform="translate(5168.47265625, 16.75)" id="flowchart-O-27" class="node
default default flowchart-label"><rect height="33.5" width="181.2421875" y="-16.75" x="-90.62109375" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-83.12109375, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="166.2421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">CLI did not exit
cleanly</span></div></foreignObject></g></g></g></g></svg>

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High_Level_Doc-61.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-61.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 735.267578125 471.0546875"
style="max-width: 735.268px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet

```

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ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

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cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M282.962890625,22.173990625332905L250.19466145833334,29.769992187777422C217.42643229166666,37.3659937502219
4,151.88997395833334,52.55799687511097,119.12174479166667,64.97899843755549C86.353515625,77.39999999999999,86.35
3515625,87.05,86.353515625,91.875L86.353515625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"
d="M86.353515625,135.5L86.353515625,139.66666666666666C86.353515625,143.83333333333334,86.353515625,152.16666666
666666,86.41953202547457,159.70016975753654C86.48554842594915,167.23367284840646,86.61758122689828,173.96734569
68129,86.68359762737288,177.33418212101614L86.74961402784744,180.70101854521937"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-D" id="L-C-D-0"
d="M60.58227593139106,327.28344780639105L55.89082890115922,337.28698775532587C51.19938187092737,347.2905277042
607,41.816487810463684,367.2976076021303,37.12504078023184,382.1261475510651C32.43359375,396.95468750000003,32.4
3359375,406.6046875,32.43359375,411.4296875L32.43359375,416.2546875"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C
LE-E" id="L-C-E-0"
d="M113.83950952012873,326.56869360487127L118.60584126677395,336.69135925405936C123.37217301341916,346.8140249
0324746,132.9048365067096,367.05935620162376,137.6711682533548,382.0070218508119C142.4375,396.95468750000003,142
```

.4375,406.6046875,142.4375,411.4296875L142.4375,416.2546875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-F" id="L-A-F-0"

d="M306.361328125,33.5L306.361328125,39.208333333333336C306.361328125,44.916666666666664,306.361328125,56.333333333333336,306.361328125,66.866666666666666C306.361328125,77.39999999999999,306.361328125,87.05,306.361328125,91.875L306.361328125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-G" id="L-F-G-0"

d="M306.361328125,135.5L306.361328125,139.66666666666666C306.361328125,143.83333333333334,306.361328125,152.16666666666666,306.42734452547455,159.70016975753654C306.49336092594916,167.23367284840646,306.62539372689827,173.9673456968129,306.6914101273729,177.33418212101614L306.75742652784743,180.70101854521937"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-H" id="L-G-H-0"

d="M279.87533422987127,326.56869360487127L274.94233581655936,336.69135925405936C270.0093374032475,346.81402490324746,260.14334057662376,367.05935620162376,255.21034216331188,382.0070218508119C250.27734375,396.95468750000003,250.27734375,406.6046875,250.27734375,411.4296875L250.27734375,416.2546875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-I" id="L-G-I-0"

d="M343.05186807370194,317.36414755129806L351.89706454058495,329.02090420941505C360.74226100746796,340.67766086753204,378.4326539412339,363.9911741837661,387.277850408117,380.472930841883C396.123046875,396.95468750000003,396.123046875,406.6046875,396.123046875,411.4296875L396.123046875,416.2546875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-J" id="L-A-J-0"

d="M329.759765625,20.902654115408144L373.75390625,28.71054509617345C417.748046875,36.51843607693876,505.736328125,52.134218038469385,549.73046875,64.7671090192347C593.724609375,77.39999999999999,593.724609375,87.05,593.724609375,91.875L593.724609375,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-J LE-K" id="L-J-K-0"

d="M593.724609375,135.5L593.724609375,139.66666666666666C593.724609375,143.83333333333334,593.724609375,152.1666

6666666666,593.7906257754745,159.70016975753654C593.8566421759491,167.23367284840646,593.9886749768983,173.9673

456968129,594.0546913773728,177.33418212101614L594.1207077778474,180.70101854521937"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-L" id="L-K-L-0"

d="M558.0340694262981,317.36414755129806L549.0222062927484,329.02090420941505C540.0103431591987,340.6776608675

3204,521.9866168920994,363.9911741837661,512.9747537585497,380.472930841883C503.962890625,396.95468750000003,503

.962890625,406.6046875,503.962890625,411.4296875L503.962890625,416.2546875"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-M" id="L-K-M-0"

d="M620.4958490686089,327.28344780639105L625.0206294321741,337.28698775532587C629.5454097957393,347.2905277042

607,638.5949705228696,367.2976076021303,643.1197508864349,382.1261475510651C647.64453125,396.95468750000003,647.

64453125,406.6046875,647.64453125,411.4296875L647.64453125,416.2546875"/></g><g class="edgeLabels"><g

transform="translate(86.353515625, 67.75)" class="edgeLabel"><g transform="translate(-29.09765625, -9.25)"

class="label"><foreignObject height="18.5" width="58.1953125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Message</div></foreignObject></g></g><g

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g

transform="translate(32.43359375, 387.3046875)" class="edgeLabel"><g transform="translate(-11.32421875, -9.25)"

class="label"><foreignObject height="18.5" width="22.6484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Yes</div></foreignObject></g></g><g

transform="translate(142.4375, 387.3046875)" class="edgeLabel"><g transform="translate(-9.3984375, -9.25)"

class="label"><foreignObject height="18.5" width="18.796875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">No</div></foreignObject></g></g><g

transform="translate(306.361328125, 67.75)" class="edgeLabel"><g transform="translate(-29.09765625, -9.25)"

class="label"><foreignObject height="18.5" width="58.1953125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Message</div></foreignObject></g></g><g

class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g transform="translate(250.27734375, 387.3046875)" class="edgeLabel"><g transform="translate(-11.32421875, -9.25)" class="label"><foreignObject height="18.5" width="22.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Yes</div></foreignObject></g></g><g transform="translate(396.123046875, 387.3046875)" class="edgeLabel"><g transform="translate(-9.3984375, -9.25)" class="label"><foreignObject height="18.5" width="18.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">No</div></foreignObject></g></g><g transform="translate(593.724609375, 67.75)" class="edgeLabel"><g transform="translate(-29.09765625, -9.25)" class="label"><foreignObject height="18.5" width="58.1953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Message</div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g transform="translate(503.962890625, 387.3046875)" class="edgeLabel"><g transform="translate(-11.32421875, -9.25)" class="label"><foreignObject height="18.5" width="22.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Yes</div></foreignObject></g></g><g transform="translate(647.64453125, 387.3046875)" class="edgeLabel"><g transform="translate(-9.3984375, -9.25)" class="label"><foreignObject height="18.5" width="18.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">No</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(306.361328125, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g transform="translate(86.353515625, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="116.375" y="-16.75" x="-58.1875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-50.6875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="101.375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">send_message</div></foreignObject></g></g><g transform="translate(86.353515625, 269.27734375)"
id="flowchart-C-3" class="node default default flowchart-label"><polygon style="" transform="translate(-83.77734375,83.77734375)"
class="label-container" points="83.77734375,0 167.5546875,-83.77734375 83.77734375,-167.5546875 0,-83.77734375"/><g
transform="translate(-59.52734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="119.0546875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Correct
Schema?</div></foreignObject></g></g><g transform="translate(32.43359375, 438.3046875)" id="flowchart-D-5"
class="node default default flowchart-label"><rect height="33.5" width="64.8671875" y="-16.75" x="-32.43359375" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-24.93359375, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="49.8671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Output</div></foreignObject></g></g><g
transform="translate(142.4375, 438.3046875)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5"
width="50.8125" y="-16.75" x="-25.40625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-17.90625,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="35.8125"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml">Error</div></foreignObject></g></g><g
transform="translate(306.361328125, 118.75)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5"
width="223.640625" y="-16.75" x="-111.8203125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-104.3203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="208.640625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">send_message_missing_types</div></foreignObject></g></g><g transform="translate(306.361328125,
269.27734375)" id="flowchart-G-11" class="node default default flowchart-label"><polygon style=""
transform="translate(-83.77734375,83.77734375)" class="label-container" points="83.77734375,0 167.5546875,-83.77734375
83.77734375,-167.5546875 0,-83.77734375"/><g transform="translate(-59.52734375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="119.0546875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Correct Schema?</div></foreignObject></g></g><g
transform="translate(250.27734375, 438.3046875)" id="flowchart-H-13" class="node default default flowchart-label"><rect

height="33.5" width="64.8671875" y="-16.75" x="-32.43359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-24.93359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="49.8671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Output</div></foreignObject></g></g><g transform="translate(396.123046875, 438.3046875)"
id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5" width="50.8125" y="-16.75" x="-25.40625" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-17.90625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="35.8125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Error</div></foreignObject></g></g><g transform="translate(593.724609375, 118.75)"
id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="251.0859375" y="-16.75"
x="-125.54296875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-118.04296875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="236.0859375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">send_message_missing_docstring</div></foreignObject></g></g><g
transform="translate(593.724609375, 269.27734375)" id="flowchart-K-19" class="node default default flowchart-label"><polygon
style="" transform="translate(-83.77734375,83.77734375)" class="label-container" points="83.77734375,0
167.5546875,-83.77734375 83.77734375,-167.5546875 0,-83.77734375"/><g transform="translate(-59.52734375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="119.0546875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Correct Schema?</div></foreignObject></g></g><g
transform="translate(503.962890625, 438.3046875)" id="flowchart-L-21" class="node default default flowchart-label"><rect
height="33.5" width="64.8671875" y="-16.75" x="-32.43359375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-24.93359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="49.8671875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Output</div></foreignObject></g></g><g transform="translate(647.64453125, 438.3046875)"
id="flowchart-M-23" class="node default default flowchart-label"><rect height="33.5" width="50.8125" y="-16.75" x="-25.40625" ry="0"
rx="0" style="" class="basic label-container"/><g transform="translate(-17.90625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="35.8125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">Error</div></foreignObject></g></g></g></g></g></svg>

High_Level_Doc-62.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-62.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 7750.28515625 763.5"
style="max-width: 7750.29px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
```

```

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M2833.791015625,18.4106362353589L2367.1175130208335,26.633863529465753C1900.4440104166667,34.8570908235726,9
67.0970052083334,51.3035454117863,500.4235026041667,64.35177270589314C33.75,77.39999999999999,33.75,87.05,33.75,91.
875L33.75,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"

d="M2833.791015625,18.477023971355365L2385.6604817708335,26.68918664279614C1937.5299479166667,34.9013493142369
1,1041.2688802083333,51.32567465711846,593.1383463541666,64.36283732855922C145.0078125,77.39999999999999,145.007
8125,87.05,145.0078125,91.875L145.0078125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"

d="M2833.791015625,18.718306834378733L2442.51953125,26.890255695315613C2051.248046875,35.06220455625249,1268.70

```

5078125,51.40610227812624,877.43359375,64.40305113906312C486.162109375,77.39999999999999,486.162109375,87.05,486.162109375,91.875L486.162109375,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0" d="M2856.7218998927697,33.5L2832.419291577308,39.208333333333336C2808.116683261846,44.916666666666664,2759.511466630923,56.333333333333336,2735.208858315462,66.866666666666666C2710.90625,77.39999999999999,2710.90625,87.05,2710.90625,91.875L2710.90625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-F" id="L-C-F-0" d="M141.58237591911765,135.5L140.41500076593138,141.20833333333334C139.2476256127451,146.91666666666666,136.91287530637257,158.33333333333334,135.74550015318627,168.86666666666667C134.578125,179.4,134.578125,189.0499999999998,134.578125,193.875L134.578125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-G" id="L-F-G-0" d="M134.578125,237.5L134.578125,243.20833333333334C134.578125,248.91666666666666,134.578125,260.3333333333333,134.578125,270.8666666666667C134.578125,281.40000000000003,134.578125,291.05,134.578125,295.875L134.578125,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-H" id="L-C-H-0" d="M191.234375,129.9860650854526L218.5,136.6133875712105C245.765625,143.2407100569684,300.296875,156.4953550284842,327.5625,167.9476775142421C354.828125,179.4,354.828125,189.04999999999998,354.828125,193.875L354.828125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H LE-I" id="L-H-I-0" d="M354.828125,237.5L354.828125,243.20833333333334C354.828125,248.91666666666666,354.828125,260.3333333333333,354.828125,270.8666666666667C354.828125,281.40000000000003,354.828125,291.05,354.828125,295.875L354.828125,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-J" id="L-A-J-0" d="M2895.685920266544,33.5L2884.6620950137863,39.208333333333336C2873.6382697610293,44.916666666666664,2851.5906192555144,56.333333333333336,2840.5667940027574,66.866666666666666C2829.54296875,77.39999999999999,2829.54296875,87.05,2829.54296875,91.875L2829.54296875,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-K" id="L-A-K-0"

d="M2960.380485983456,33.5L2971.4043112362137,39.208333333333336C2982.4281364889707,44.916666666666664,3004.4757869944856,56.333333333333336,3015.4996122472426,66.866666666666666C3026.5234375,77.399999999999999,3026.5234375,87.05,3026.5234375,91.875L3026.5234375,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-L" id="L-A-L-0"

d="M3022.275390625,30.585504455626456L3064.4671223958335,36.77958704635538C3106.6588541666665,42.9736696370843,3191.0423177083335,55.36183481854215,3233.2340494791665,66.38091740927108C3275.42578125,77.399999999999999,3275.42578125,87.05,3275.42578125,91.875L3275.42578125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-M" id="L-A-M-0"

d="M3022.275390625,25.175180513758075L3101.6474609375,32.27098376146506C3181.01953125,39.36678700917205,3339.763671875,53.55839350458603,3419.1357421875,65.479196752293C3498.5078125,77.399999999999999,3498.5078125,87.05,3498.5078125,91.875L3498.5078125,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-N" id="L-A-N-0"

d="M3022.275390625,23.0373231663852L3133.9768880208335,30.489435971987664C3245.6783854166665,37.941548777590135,3469.0813802083335,52.845774388795064,3580.7828776041665,65.12288719439753C3692.484375,77.399999999999999,3692.484375,87.05,3692.484375,91.875L3692.484375,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-O" id="L-A-O-0"

d="M3022.275390625,22.007118686431717L3158.9443359375,29.630932238693095C3295.61328125,37.25474579095448,3568.951171875,52.50237289547724,3705.6201171875,64.95118644773862C3842.2890625,77.399999999999999,3842.2890625,87.05,3842.2890625,91.875L3842.2890625,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-P" id="L-E-P-0"

d="M2681.05859375,119.4715083705791L2334.4016927083335,127.8512569754826C1987.7447916666667,136.23100558038607,1294.4309895833333,152.99050279019303,947.7740885416666,166.19525139509653C601.1171875,179.4,601.1171875,189.04999999999998,601.1171875,193.875L601.1171875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-Q" id="L-E-Q-0"

d="M2681.05859375,119.58640831920329L2382.7063802083335,127.94700693266941C2084.3541666666665,136.307605546135

53,1487.6497395833333,153.02880277306778,1189.2975260416667,166.21440138653386C890.9453125,179.4,890.9453125,189.04999999999998,890.9453125,193.875L890.9453125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-R" id="L-E-R-0"

d="M2681.05859375,119.72953658830863L2427.0279947916665,128.06628049025718C2172.9973958333335,136.40302439220577,1664.9361979166667,153.07651219610287,1410.9055989583333,166.23825609805144C1156.875,179.4,1156.875,189.04999999999998,1156.875,193.875L1156.875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-S" id="L-R-S-0"

d="M1127.49609375,223.03759974712835L1023.2298177083334,231.15633312260695C918.9635416666666,239.27506649808558,710.4309895833334,255.51253324904278,606.1647135416666,268.4562666245214C501.8984375,281.40000000000003,501.8984375,291.05,501.8984375,295.875L501.8984375,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-S LE-T" id="L-S-T-0"

d="M440.5,331.9474023887926L393.990234375,338.91450199066054C347.48046875,345.8816015925284,254.4609375,359.8158007962642,207.951171875,371.60790039813213C161.44140625,383.40000000000003,161.44140625,393.05,161.44140625,397.875L161.44140625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-S LE-U" id="L-S-U-0"

d="M463.3860102634804,339.5L450.261128344567,345.2083333333333C437.13624642565355,350.9166666666667,410.8864825878268,362.3333333333333,397.7616006689134,372.8666666666666C384.63671875,383.40000000000003,384.63671875,393.05,384.63671875,397.875L384.63671875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-S LE-V" id="L-S-V-0"

d="M540.4108647365196,339.5L553.535746655433,345.2083333333333C566.6606285743463,350.9166666666667,592.9103924121732,362.3333333333333,606.0352743310866,372.8666666666666C619.16015625,383.40000000000003,619.16015625,393.05,619.16015625,397.875L619.16015625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-S LE-W" id="L-S-W-0"

d="M563.296875,335.512382385251L593.9563802083334,341.8853186543758C624.6158854166666,348.2582549235006,685.9348958333334,361.00412746175033,716.5944010416666,372.2020637308751C747.25390625,383.40000000000003,747.25390625,393.05,747.25390625,397.875L747.25390625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-X" id="L-R-X-0"

d="M1127.49609375,224.25578095438303L1061.1614583333333,232.17148412865254C994.8268229166666,240.087187302922,862.1575520833334,255.918593651461,795.8229166666666,268.6592968257305C729.48828125,281.4000000000003,729.48828125,291.05,729.48828125,295.875L729.48828125,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-Y" id="L-R-Y-0"

d="M1127.49609375,227.52639389442442L1095.541015625,234.89699491202035C1063.5859375,242.26759592961628,999.67578125,257.00879796480814,967.720703125,269.2043989824041C935.765625,281.4000000000003,935.765625,291.05,935.765625,295.875L935.765625,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-Z" id="L-R-Z-0"

d="M1163.0151271446077,237.5L1165.107658037173,243.2083333333334C1167.2001889297385,248.9166666666666,1171.3852507148692,260.3333333333333,1173.4777816074345,270.8666666666667C1175.5703125,281.4000000000003,1175.5703125,291.05,1175.5703125,295.875L1175.5703125,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-AA" id="L-R-AA-0"

d="M1186.25390625,226.9944404649497L1221.3483072916667,234.45370038745807C1256.4427083333333,241.91296030996645,1326.6315104166667,256.83148015498324,1361.7259114583333,269.11574007749164C1396.8203125,281.4000000000003,1396.8203125,291.05,1396.8203125,295.875L1396.8203125,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-BB" id="L-R-BB-0"

d="M1186.25390625,224.0416355585305L1257.22265625,231.99302963210872C1328.19140625,239.944423705687,1470.12890625,255.84721185284351,1541.09765625,268.62360592642176C1612.06640625,281.4000000000003,1612.06640625,291.05,1612.06640625,295.875L1612.06640625,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-Y LE-CC" id="L-Y-CC-0"

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d="M1175.5703125,339.5L1175.5703125,345.20833333333333C1175.5703125,350.9166666666667,1175.5703125,362.3333333333333,1174.6900086186108,372.8809287615789C1173.8097047372219,383.4285241898245,1172.0490969744435,393.1070483796491,1171.1687930930543,397.94631047456136L1170.2884892116651,402.78557256947363"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
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marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-BB LE-DD" id="L-BB-DD-0"

d="M1612.06640625,339.5L1612.06640625,345.20833333333333C1612.06640625,350.9166666666667,1612.06640625,362.3333333333333,1612.06640625,372.8666666666666C1612.06640625,383.40000000000003,1612.06640625,393.05,1612.06640625,397.875L1612.06640625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-R LE-EE" id="L-R-EE-0"

d="M1186.25390625,222.947019251147L1295.0208333333333,231.08084937595584C1403.7877604166667,239.21467950076467,1621.3216145833333,255.48233975038235,1730.0885416666667,268.4411698751912C1838.85546875,281.40000000000003,1838.85546875,291.05,1838.85546875,295.875L1838.85546875,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-R LE-FF" id="L-R-FF-0"

d="M1186.25390625,222.50815315790197L1323.3932291666667,230.71512763158498C1460.5325520833333,238.92210210526798,1734.8111979166667,255.33605105263396,1871.9505208333333,268.368025526317C2009.08984375,281.40000000000003,2009.08984375,291.05,2009.08984375,295.875L2009.08984375,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-DD LE-GG" id="L-DD-GG-0"

d="M1612.06640625,441.5L1612.06640625,447.20833333333333C1612.06640625,452.9166666666667,1612.06640625,464.3333333333333,1612.06640625,474.8666666666666C1612.06640625,485.40000000000003,1612.06640625,495.05,1612.06640625,499.875L1612.06640625,504.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
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d="M1612.06640625,543.5L1612.06640625,549.2083333333334C1612.06640625,554.9166666666666,1612.06640625,566.33333333333334,1612.06640625,576.8666666666667C1612.06640625,587.4,1612.06640625,597.0500000000001,1612.06640625,601.875L1612.06640625,606.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-II" id="L-E-II-0"

d="M2681.05859375,121.39850886254894L2590.2415364583335,129.4570907187908C2499.4244791666665,137.51567257503262,2317.7903645833335,153.6328362875163,2226.9733072916665,166.51641814375816C2136.15625,179.4,2136.15625,189.049999999998,2136.15625,193.875L2136.15625,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-II LE-JJ" id="L-II-JJ-0"

d="M2122.9843558517155,237.5L2118.4954267514295,243.2083333333334C2114.0064976511435,248.9166666666666,2105.0286394505715,260.3333333333333,2104.4826105759835,271.0556440063674C2103.936581701395,281.7779546794015,2111.8223821527904,291.8059093588029,2115.765282378488,296.81988669850364L2119.7081826041854,301.83386403820435"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-II LE-JJ" id="L-II-JJ-1"

d="M2181.8515625,228.9697544812003L2221.4889322916665,236.09979540100025C2261.1263020833335,243.22983632080022,2340.4010416666665,257.4899181604001,2336.3902131821774,272.47147499612146C2332.3793846976882,287.4530318318428,2245.0829881453765,303.1560636636856,2201.434789869221,311.007579579607L2157.7865915930647,318.8590954955284"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-KK" id="L-E-KK-0"

d="M2681.05859375,122.95056914337455L2625.6354166666665,130.75047428614548C2570.2122395833335,138.55037942891636,2459.3658854166665,154.15018971445818,2403.9427083333335,166.77509485722908C2348.51953125,179.4,2348.51953125,189.04999999999998,2348.51953125,193.875L2348.51953125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-LL" id="L-E-LL-0"

d="M2681.05859375,135.35025559105432L2670.75,141.0835463258786C2660.44140625,146.81683706070288,2639.82421875,158.28341853035144,2629.515625,168.84170926517572C2619.20703125,179.4,2619.20703125,189.04999999999998,2619.20703125,193.875L2619.20703125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-MM" id="L-E-MM-0"

d="M2740.75390625,135.35025559105432L2751.0625,141.0835463258786C2761.37109375,146.81683706070288,2781.98828125,158.28341853035144,2792.296875,168.84170926517572C2802.60546875,179.4,2802.60546875,189.04999999999998,2802.60546875,193.875L2802.60546875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-MM LE-NN" id="L-MM-NN-0"

d="M2802.60546875,237.5L2802.60546875,243.20833333333334C2802.60546875,248.91666666666666,2802.60546875,260.33333333333333,2802.60546875,270.86666666666667C2802.60546875,281.40000000000003,2802.60546875,291.05,2802.60546875,295.875L2802.60546875,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-OO" id="L-NN-OO-0"

d="M2741.20703125,325.92656149694477L2587.1471354166665,333.8971345807873C2433.0872395833335,341.8677076646298,2124.9674479166665,357.8088538323149,1970.9075520833333,370.6044269161575C1816.84765625,383.40000000000003,1816.84765625,393.05,1816.84765625,397.875L1816.84765625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-PP" id="L-NN-PP-0"

d="M2741.20703125,326.7469983296353L2620.8704427083335,334.58083194136276C2500.5338541666665,342.4146655530902,2259.8606770833335,358.0823327765451,2139.5240885416665,370.7411663882726C2019.1875,383.40000000000003,2019.1875,393.05,2019.1875,397.875L2019.1875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-QQ" id="L-NN-QQ-0"

d="M2741.20703125,328.5110262675626L2660.8509114583335,336.05085522296883C2580.4947916666665,343.59068417837506,2419.7825520833335,358.6703420891875,2339.4264322916665,371.0351710445937C2259.0703125,383.40000000000003,2259.0703125,393.05,2259.0703125,397.875L2259.0703125,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-RR" id="L-NN-RR-0"

d="M2741.20703125,332.03464870624754L2695.23046875,338.9872072552063C2649.25390625,345.939765804165,2557.30078125,359.8448829020825,2511.32421875,371.6224414510412C2465.34765625,383.40000000000003,2465.34765625,393.05,2465.34765625,397.875L2465.34765625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-SS" id="L-NN-SS-0"

d="M2802.60546875,339.5L2802.60546875,345.2083333333333C2802.60546875,350.9166666666667,2802.60546875,362.3333333333333,2802.60546875,372.8666666666666C2802.60546875,383.40000000000003,2802.60546875,393.05,2802.60546875,397.8

75L2802.60546875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-NN LE-TT" id="L-NN-TT-0"

d="M2864.00390625,336.90286016949153L2890.6458333333335,343.04405014124296C2917.2877604166665,349.185240112994
34,2970.5716145833335,361.4676200564972,2997.2135416666665,372.4338100282486C3023.85546875,383.4000000000003,30
23.85546875,393.05,3023.85546875,397.875L3023.85546875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-UU" id="L-NN-UU-0"

d="M2864.00390625,330.3806781403495L2922.1640625,337.6088984502913C2980.32421875,344.83711876023307,3096.644531
25,359.2935593801165,3154.8046875,371.3467796900582C3212.96484375,383.4000000000003,3212.96484375,393.05,3212.96
484375,397.875L3212.96484375,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-RR LE-VV" id="L-RR-VV-0"

d="M2465.34765625,441.5L2465.34765625,447.2083333333333C2465.34765625,452.9166666666667,2465.34765625,464.333333
3333333,2513.3302810331006,477.50282395223485C2561.3129058162017,490.6723145711364,2657.278155382403,505.594629
1422728,2705.2607801655035,513.055786427841L2753.2434049486046,520.5169437134092"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-SS LE-VV" id="L-SS-VV-0"

d="M2802.60546875,441.5L2802.60546875,447.2083333333333C2802.60546875,452.9166666666667,2802.60546875,464.333333
3333333,2801.7251648686106,474.8809287615789C2800.8448609872216,485.4285241898245,2799.0842532244437,495.107048
3796491,2798.2039493430543,499.94631047456136L2797.3236454616654,504.78557256947363"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-TT LE-VV" id="L-TT-VV-0"

d="M3023.85546875,441.5L3023.85546875,447.2083333333333C3023.85546875,452.9166666666667,3023.85546875,464.333333
3333333,2992.1046665625177,477.06595664988737C2960.353864375035,489.7985799664414,2896.85226000007,503.84715993
28829,2865.1014578125883,510.8714499161036L2833.3506556251054,517.8957398993243"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-UU LE-WW" id="L-UU-WW-0"

d="M3212.96484375,441.5L3212.96484375,447.2083333333333C3212.96484375,452.9166666666667,3212.96484375,464.333333

3333333,3212.96484375,474.8666666666666C3212.96484375,485.40000000000003,3212.96484375,495.05,3212.96484375,499.8

75L3212.96484375,504.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-NN LE-XX" id="L-NN-XX-0"

d="M2864.00390625,327.8748122031211L2955.6061197916665,335.52067683593424C3047.2083333333335,343.1665414687474,

3230.4127604166665,358.4582707343737,3322.0149739583335,370.9291353671868C3413.6171875,383.40000000000003,3413.6

171875,393.05,3413.6171875,397.875L3413.6171875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NN LE-YY" id="L-NN-YY-0"

d="M2864.00390625,326.7581100405502L2983.978515625,334.5900917004585C3103.953125,342.4220733603668,3343.9023437

5,358.08603668018344,3463.876953125,370.74301834009174C3583.8515625,383.40000000000003,3583.8515625,393.05,3583.8

515625,397.875L3583.8515625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-WW LE-ZZ" id="L-WW-ZZ-0"

d="M3212.96484375,543.5L3212.96484375,549.2083333333334C3212.96484375,554.9166666666666,3212.96484375,566.333333

3333334,3212.96484375,576.8666666666667C3212.96484375,587.4,3212.96484375,597.0500000000001,3212.96484375,601.875

L3212.96484375,606.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-ZZ LE-AAA" id="L-ZZ-AAA-0"

d="M3212.96484375,645.5L3212.96484375,651.2083333333334C3212.96484375,656.9166666666666,3212.96484375,668.333333

3333334,3212.96484375,678.8666666666667C3212.96484375,689.4,3212.96484375,699.0500000000001,3212.96484375,703.875

L3212.96484375,708.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-E LE-BBB" id="L-E-BBB-0"

d="M2740.75390625,120.46456290175684L2883.75,128.6788024181307C3026.74609375,136.89304193450457,3312.73828125,15

3.32152096725227,3455.734375,166.36076048362614C3598.73046875,179.4,3598.73046875,189.04999999999998,3598.7304687

5,193.875L3598.73046875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-BBB LE-CCC" id="L-BBB-CCC-0"

d="M3585.5585746017155,237.5L3581.0696455014295,243.2083333333334C3576.5807164011435,248.9166666666666,3567.6

028582005715,260.3333333333333,3567.056829325984,271.0556440063674C3566.510800451395,281.7779546794015,3574.396

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marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-BBB LE-CCC" id="L-BBB-CCC-1"

d="M3644.42578125,234.17117340052192L3665.75,240.43431116710158C3687.07421875,246.69744893368127,3729.72265625,259.2237244668406,3725.6899808930525,272.93443735850593C3721.6573055361055,286.6451502501712,3670.9435173222105,301.54030050034237,3645.5866232152634,308.987875625428L3620.229729108316,316.43545075051355"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-DDD" id="L-E-DDD-0"

d="M2740.75390625,120.10995016541732L2922.333984375,128.3832918045144C3103.9140625,136.65663344361155,3467.07421875,153.20331672180578,3648.654296875,166.3016583609029C3830.234375,179.4,3830.234375,189.04999999999998,3830.234375,193.875L3830.234375,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-EEE" id="L-E-EEE-0"

d="M2740.75390625,119.47870630606371L3083.9375,127.85725525505309C3427.12109375,136.23580420404247,4113.48828125,152.99290210202125,4456.671875,166.19645105101063C4799.85546875,179.4,4799.85546875,189.04999999999998,4799.85546875,193.875L4799.85546875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-EEE LE-FFF" id="L-EEE-FFF-0"

d="M4799.85546875,237.5L4799.85546875,243.20833333333334C4799.85546875,248.91666666666666,4799.85546875,260.33333333333333,4799.85546875,270.86666666666667C4799.85546875,281.40000000000003,4799.85546875,291.05,4799.85546875,295.875L4799.85546875,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-GGG" id="L-FFF-GGG-0"

d="M4738.45703125,325.6375168848945L4567.951171875,333.6562640707454C4397.4453125,341.6750112565963,4056.43359375,357.7125056282982,3885.927734375,370.55625281414905C3715.421875,383.40000000000003,3715.421875,393.05,3715.421875,397.875L3715.421875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-HHH" id="L-FFF-HHH-0"

d="M4738.45703125,326.3960383880651L4605.5520833333333,334.2883653233876C4472.647135416667,342.18069225871005,4206.837239583333,357.96534612935505,4073.9322916666665,370.68267306467754C3941.02734375,383.40000000000003,3941.02734375,393.05,3941.02734375,397.875L3941.02734375,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-III" id="L-FFF-III-0"

d="M4738.45703125,327.59774339467464L4641.034505208333,335.28978616222884C4543.611979166667,342.98182892978303,4348.766927083333,358.36591446489155,4251.344401041667,370.88295723244573C4153.921875,383.40000000000003,4153.921875,393.05,4153.921875,397.875L4153.921875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-JJJ" id="L-FFF-JJJ-0"

d="M4738.45703125,329.3637916240388L4669.78125,336.76149302003233C4601.10546875,344.1591944160259,4463.75390625,358.95459720801296,4395.078125,371.17729860400647C4326.40234375,383.40000000000003,4326.40234375,393.05,4326.40234375,397.875L4326.40234375,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-KKK" id="L-FFF-KKK-0"

d="M4738.45703125,332.23447094736093L4693.664713541667,339.15372578946744C4648.872395833333,346.07298063157396,4559.287760416667,359.911490315787,4514.495442708333,371.6557451578935C4469.703125,383.40000000000003,4469.703125,393.05,4469.703125,397.875L4469.703125,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-LLL" id="L-FFF-LLL-0"

d="M4759.17103247549,339.5L4745.305938521242,345.2083333333333C4731.440844566993,350.9166666666667,4703.710656658496,362.3333333333333,4689.845562704249,372.8666666666666C4675.98046875,383.40000000000003,4675.98046875,393.05,4675.98046875,397.875L4675.98046875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-MMM" id="L-FFF-MMM-0"

d="M4837.930415134804,339.5L4850.90620532067,345.2083333333333C4863.881995506536,350.9166666666667,4889.833575878268,362.3333333333333,4902.809366064134,372.8666666666666C4915.78515625,383.40000000000003,4915.78515625,393.05,4915.78515625,397.875L4915.78515625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-NNN" id="L-FFF-NNN-0"

d="M4861.25390625,332.0367999721958L4907.217447916667,338.9889999768298C4953.180989583333,345.94119998146385,5045.108072916667,359.8455999907319,5091.071614583333,371.62279999536594C5137.03515625,383.40000000000003,5137.03515625,393.05,5137.03515625,397.875L5137.03515625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-OOO" id="L-FFF-OOO-0"

d="M4861.25390625,328.41830951555994L4943.091796875,335.97359126296664C5024.9296875,343.5288730103733,5188.6054

6875,358.63943650518667,5270.443359375,371.0197182525933C5352.28125,383.40000000000003,5352.28125,393.05,5352.28125,397.875L5352.28125,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-LLL LE-PPP" id="L-LLL-PPP-0" d="M4675.98046875,441.5L4675.98046875,447.2083333333333C4675.98046875,452.9166666666667,4675.98046875,464.3333333333333,4707.731270937483,477.06595664988737C4739.482073124965,489.7985799664414,4802.98367749993,503.8471599328829,4834.734479687412,510.8714499161036L4866.485281874895,517.8957398993243"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-MMM LE-PPP" id="L-MMM-PPP-0" d="M4915.78515625,441.5L4915.78515625,447.2083333333333C4915.78515625,452.9166666666667,4915.78515625,464.3333333333333,4914.904852368611,474.8809287615789C4914.024548487222,485.4285241898245,4912.263940724443,495.1070483796491,4911.383636843054,499.94631047456136L4910.503332961665,504.78557256947363"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-NNN LE-PPP" id="L-NNN-PPP-0" d="M5137.03515625,441.5L5137.03515625,447.2083333333333C5137.03515625,452.9166666666667,5137.03515625,464.3333333333333,5105.284354062517,477.06595664988737C5073.533551875035,489.7985799664414,5010.03194750007,503.8471599328829,4978.281145312588,510.8714499161036L4946.530343125105,517.8957398993243"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-OOO LE-QQQ" id="L-OOO-QQQ-0" d="M5352.28125,441.5L5352.28125,447.2083333333333C5352.28125,452.9166666666667,5352.28125,464.3333333333333,5352.28125,474.8666666666666C5352.28125,485.40000000000003,5352.28125,495.05,5352.28125,499.875L5352.28125,504.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-RRR" id="L-FFF-RRR-0" d="M4861.25390625,326.7685583444874L4980.889973958333,334.59879862040617C5100.526041666667,342.429038896325,5339.798177083333,358.0895194481625,5459.434244791667,370.74475972408123C5579.0703125,383.40000000000003,5579.0703125,393.05,5579.0703125,397.875L5579.0703125,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-FFF LE-SSS" id="L-FFF-SSS-0"

d="M4861.25390625,326.0480387477937L5009.262369791667,333.9983656231614C5157.270833333333,341.94869249852917,54
53.287760416667,357.84934624926456,5601.296223958333,370.62467312463224C5749.3046875,383.40000000000003,5749.304
6875,393.05,5749.3046875,397.875L5749.3046875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-QQQ LE-TTT" id="L-QQQ-TTT-0"

d="M5352.28125,543.5L5352.28125,549.2083333333334C5352.28125,554.9166666666666,5352.28125,566.3333333333334,5352.
28125,576.8666666666667C5352.28125,587.4,5352.28125,597.0500000000001,5352.28125,601.875L5352.28125,606.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-TTT LE-UUU" id="L-TTT-UUU-0"

d="M5352.28125,645.5L5352.28125,651.2083333333334C5352.28125,656.9166666666666,5352.28125,668.3333333333334,5352.
28125,678.8666666666667C5352.28125,689.4,5352.28125,699.0500000000001,5352.28125,703.875L5352.28125,708.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-FFF LE-VVV" id="L-FFF-VVV-0"

d="M4861.25390625,325.6245427944404L5032.575520833333,333.64545232870034C5203.897135416667,341.6663618629603,55
46.540364583333,357.7081809314802,5717.861979166667,370.55409046574005C5889.18359375,383.40000000000003,5889.183
59375,393.05,5889.18359375,397.875L5889.18359375,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-VVV LE-WWW" id="L-VVV-WWW-0"

d="M5843.48828125,434.6846899353893L5812.0078125,441.52890827949113C5780.52734375,448.3731266235929,5717.566406
25,462.0615633117964,5721.583445761037,476.623350893494C5725.6004852720735,491.1851384751914,5796.595501794148,5
06.6202769503829,5832.093010055185,514.3378461879786L5867.590518316222,522.0554154255743"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-VVV LE-WWW" id="L-VVV-WWW-1"

d="M5934.87890625,431.3876061814723L5985.779622395833,438.7813384845602C6036.680338541667,446.17507078764817,61
38.481770833333,460.96253539382406,6134.475721654486,476.3319103828822C6130.469672475639,491.7012853719404,6020.
656141826278,507.6525707438807,5965.749376501597,515.6282134298509L5910.842611176917,523.603856115821"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E
LE-XXX" id="L-E-XXX-0"

d="M2740.75390625,119.22548690642074L3269.3483072916665,127.64623908868396C3797.9427083333335,136.066991270947
17,4855.131510416667,152.9084956354736,5383.725911458333,166.15424781773677C5912.3203125,179.4,5912.3203125,189.0
499999999998,5912.3203125,193.875L5912.3203125,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-YYY" id="L-E-YYY-0"

d="M2740.75390625,119.11261288296461L3435.4375,127.55217740247052C4130.12109375,135.9917419219764,5519.48828125,
152.8708709609882,6214.171875,166.13543548049412C6908.85546875,179.4,6908.85546875,189.0499999999998,6908.855468
75,193.875L6908.85546875,198.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-YYY LE-ZZZ" id="L-YYY-ZZZ-0"

d="M6908.85546875,237.5L6908.85546875,243.2083333333334C6908.85546875,248.91666666666666,6908.85546875,260.3333
33333333,6908.85546875,270.8666666666667C6908.85546875,281.4000000000003,6908.85546875,291.05,6908.85546875,295
.875L6908.85546875,300.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-ZZZ LE-AAAA" id="L-ZZZ-AAAA-0"

d="M6847.45703125,326.27505210944304L6709.639322916667,334.1875434245359C6571.821614583333,342.1000347396287,62
96.186197916667,357.9250173698144,6158.368489583333,370.66250868490715C6020.55078125,383.4000000000003,6020.550
78125,393.05,6020.55078125,397.875L6020.55078125,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ZZZ LE-BBBB" id="L-ZZZ-BBBB-0"

d="M6847.45703125,327.31484080930716L6743.362630208333,335.05403400775594C6639.268229166667,342.7932272062048,6
431.079427083333,358.27161360310237,6326.985026041667,370.83580680155114C6222.890625,383.4000000000003,6222.890
625,393.05,6222.890625,397.875L6222.890625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ZZZ LE-CCCC" id="L-ZZZ-CCCC-0"

d="M6847.45703125,329.769606469522L6783.343098958333,337.099672057935C6719.229166666667,344.429737646348,6591.0
01302083333,359.08986882317396,6526.887369791667,371.24493441158694C6462.7734375,383.4000000000003,6462.773437
5,393.05,6462.7734375,397.875L6462.7734375,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ZZZ LE-DDDD" id="L-ZZZ-DDDD-0"

d="M6847.45703125,335.8077944290601L6817.72265625,342.13149535755C6787.98828125,348.45519628604006,6728.5195312
5,361.10259814302003,6698.78515625,372.25129907151C6669.05078125,383.4000000000003,6669.05078125,393.05,6669.050

78125,397.875L6669.05078125,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ZZZ LE-EEEE" id="L-ZZZ-EEEE-0"

d="M6908.85546875,339.5L6908.85546875,345.20833333333333C6908.85546875,350.9166666666667,6908.85546875,362.333333

3333333,6908.85546875,372.86666666666666C6908.85546875,383.40000000000003,6908.85546875,393.05,6908.85546875,397.8

75L6908.85546875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-ZZZ LE-FFFF" id="L-ZZZ-FFFF-0"

d="M6970.25390625,336.90286016949153L6996.8958333333333,343.04405014124296C7023.537760416667,349.18524011299434,

7076.821614583333,361.4676200564972,7103.463541666667,372.4338100282486C7130.10546875,383.40000000000003,7130.10

546875,393.05,7130.10546875,397.875L7130.10546875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ZZZ LE-GGGG" id="L-ZZZ-GGGG-0"

d="M6970.25390625,330.3806781403495L7028.4140625,337.6088984502913C7086.57421875,344.83711876023307,7202.894531

25,359.2935593801165,7261.0546875,371.3467796900582C7319.21484375,383.40000000000003,7319.21484375,393.05,7319.21

484375,397.875L7319.21484375,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-DDDD LE-HHHH" id="L-DDDD-HHHH-0"

d="M6669.05078125,441.5L6669.05078125,447.20833333333333C6669.05078125,452.9166666666667,6669.05078125,464.333333

3333333,6700.801583437482,477.06595664988737C6732.552385624965,489.7985799664414,6796.05398999993,503.847159932

8829,6827.804792187412,510.8714499161036L6859.555594374895,517.8957398993243"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-EEEE LE-HHHH" id="L-EEEE-HHHH-0"

d="M6908.85546875,441.5L6908.85546875,447.20833333333333C6908.85546875,452.9166666666667,6908.85546875,464.333333

3333333,6907.975164868611,474.8809287615789C6907.094860987221,485.4285241898245,6905.334253224443,495.107048379

6491,6904.453949343054,499.94631047456136L6903.573645461665,504.78557256947363"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-FFFF LE-HHHH" id="L-FFFF-HHHH-0"

d="M7130.10546875,441.5L7130.10546875,447.20833333333333C7130.10546875,452.9166666666667,7130.10546875,464.333333

3333333,7098.354666562518,477.06595664988737C7066.603864375035,489.7985799664414,7003.10226000007,503.847159932

8829,6971.351457812588,510.8714499161036L6939.600655625105,517.8957398993243"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-GGGG LE-IIII" id="L-GGGG-IIII-0"
d="M7319.21484375,441.5L7319.21484375,447.20833333333333C7319.21484375,452.9166666666667,7319.21484375,464.333333
3333333,7319.21484375,474.8666666666666C7319.21484375,485.40000000000003,7319.21484375,495.05,7319.21484375,499.8
75L7319.21484375,504.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-ZZZ LE-JJJJ" id="L-ZZZ-JJJJ-0"
d="M6970.25390625,327.8748122031211L7061.856119791667,335.52067683593424C7153.458333333333,343.1665414687474,73
36.662760416667,358.4582707343737,7428.264973958333,370.9291353671868C7519.8671875,383.40000000000003,7519.86718
75,393.05,7519.8671875,397.875L7519.8671875,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-ZZZ LE-KKKK" id="L-ZZZ-KKKK-0"
d="M6970.25390625,326.7581100405502L7090.228515625,334.5900917004585C7210.203125,342.4220733603668,7450.1523437
5,358.08603668018344,7570.126953125,370.74301834009174C7690.1015625,383.40000000000003,7690.1015625,393.05,7690.1
015625,397.875L7690.1015625,402.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-IIII LE-LLLL" id="L-IIII-LLLL-0"
d="M7319.21484375,543.5L7319.21484375,549.2083333333334C7319.21484375,554.9166666666666,7319.21484375,566.333333
3333334,7319.21484375,576.8666666666667C7319.21484375,587.4,7319.21484375,597.0500000000001,7319.21484375,601.875
L7319.21484375,606.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-LLLL LE-MMMM" id="L-LLLL-MMMM-0"
d="M7319.21484375,645.5L7319.21484375,651.2083333333334C7319.21484375,656.9166666666666,7319.21484375,668.333333
3333334,7319.21484375,678.8666666666667C7319.21484375,689.4,7319.21484375,699.0500000000001,7319.21484375,703.875
L7319.21484375,708.7"/></g><g class="edgeLabels"><g transform="translate(33.75, 67.75)" class="edgeLabel"><g
transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5" width="54.3828125"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">imports</div></foreignObject></g></g><g transform="translate(145.0078125, 67.75)"
class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5"

width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">imports</div></foreignObject></g></g><g transform="translate(486.162109375, 67.75)" class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5" width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">imports</div></foreignObject></g></g><g transform="translate(2710.90625, 67.75)" class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5" width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">imports</div></foreignObject></g></g><g transform="translate(134.578125, 169.75)" class="edgeLabel"><g transform="translate(-37.76953125, -9.25)" class="label"><foreignObject height="18.5" width="75.5390625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">check_call</div></foreignObject></g></g><g transform="translate(134.578125, 271.75)" class="edgeLabel"><g transform="translate(-47.578125, -9.25)" class="label"><foreignObject height="18.5" width="95.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">-m pip install</div></foreignObject></g></g><g transform="translate(354.828125, 169.75)" class="edgeLabel"><g transform="translate(-37.76953125, -9.25)" class="label"><foreignObject height="18.5" width="75.5390625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">check_call</div></foreignObject></g></g><g transform="translate(354.828125, 271.75)" class="edgeLabel"><g transform="translate(-47.578125, -9.25)" class="label"><foreignObject height="18.5" width="95.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">-m pip install</div></foreignObject></g></g><g transform="translate(2829.54296875, 67.75)" class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5" width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">imports</div></foreignObject></g></g><g transform="translate(3026.5234375, 67.75)" class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5" width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">imports</div></foreignObject></g></g><g transform="translate(3275.42578125, 67.75)"

class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5"

width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">imports</div></foreignObject></g></g><g transform="translate(3498.5078125, 67.75)"

class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5"

width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">imports</div></foreignObject></g></g><g transform="translate(3692.484375, 67.75)"

class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5"

width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">imports</div></foreignObject></g></g><g transform="translate(3842.2890625, 67.75)"

class="edgeLabel"><g transform="translate(-27.19140625, -9.25)" class="label"><foreignObject height="18.5"

width="54.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">imports</div></foreignObject></g></g><g transform="translate(601.1171875, 169.75)"

class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(890.9453125, 169.75)"

class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(1156.875, 169.75)" class="edgeLabel"><g

transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div style="display: inline-block;

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(501.8984375, 271.75)"

class="edgeLabel"><g transform="translate(-42.27734375, -9.25)" class="label"><foreignObject height="18.5"

width="84.5546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">config_path</div></foreignObject></g></g><g transform="translate(161.44140625, 373.75)"

class="edgeLabel"><g transform="translate(-79.12890625, -9.25)" class="label"><foreignObject height="18.5"

width="158.2578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">archival_storage_type</div></foreignObject></g></g><g transform="translate(384.63671875, 373.75)"

class="edgeLabel"><g transform="translate(-72.953125, -9.25)" class="label"><foreignObject height="18.5" width="145.90625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">archival_storage_uri</div></foreignObject></g></g><g transform="translate(619.16015625, 373.75)"

class="edgeLabel"><g transform="translate(-26.81640625, -9.25)" class="label"><foreignObject height="18.5"

width="53.6328125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">replace</div></foreignObject></g></g><g transform="translate(747.25390625, 373.75)"

class="edgeLabel"><g transform="translate(-15.72265625, -9.25)" class="label"><foreignObject height="18.5"

width="31.4453125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">save</div></foreignObject></g></g><g transform="translate(729.48828125, 271.75)"

class="edgeLabel"><g transform="translate(-65.71484375, -9.25)" class="label"><foreignObject height="18.5"

width="131.4296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">embedding_model</div></foreignObject></g></g><g transform="translate(935.765625, 271.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(1175.5703125, 271.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(1396.8203125, 271.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(1612.06640625, 271.75)"

class="edgeLabel"><g transform="translate(-8.9140625, -9.25)" class="label"><foreignObject height="18.5" width="17.828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">db</div></foreignObject></g></g><g transform="translate(935.765625, 373.75)" class="edgeLabel"><g

transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5" width="41.0703125"><div style="display:

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(1175.5703125, 373.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(1396.8203125, 373.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(1612.06640625, 373.75)"

class="edgeLabel"><g transform="translate(-24.66796875, -9.25)" class="label"><foreignObject height="18.5"

width="49.3359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">get_all</div></foreignObject></g></g><g transform="translate(1838.85546875, 271.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(2009.08984375, 271.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(1612.06640625, 475.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(1612.06640625, 577.75)"

class="edgeLabel"><g transform="translate(-21.32421875, -9.25)" class="label"><foreignObject height="18.5"

width="42.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">assert</div></foreignObject></g></g><g transform="translate(2136.15625, 169.75)"

class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(2096.05078125, 271.75)"

class="edgeLabel"><g transform="translate(-23.078125, -9.25)" class="label"><foreignObject height="18.5" width="46.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">delete</div></foreignObject></g></g><g transform="translate(2419.67578125, 271.75)" class="edgeLabel"><g transform="translate(-37.1328125, -9.25)" class="label"><foreignObject height="18.5" width="74.265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">...finished</div></foreignObject></g></g><g transform="translate(2348.51953125, 169.75)" class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">skipif</div></foreignObject></g></g><g transform="translate(2619.20703125, 169.75)" class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">skipif</div></foreignObject></g></g><g transform="translate(2802.60546875, 169.75)" class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">skipif</div></foreignObject></g></g><g transform="translate(2802.60546875, 271.75)" class="edgeLabel"><g transform="translate(-42.27734375, -9.25)" class="label"><foreignObject height="18.5" width="84.5546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">config_path</div></foreignObject></g></g><g transform="translate(1816.84765625, 373.75)" class="edgeLabel"><g transform="translate(-79.12890625, -9.25)" class="label"><foreignObject height="18.5" width="158.2578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">archival_storage_type</div></foreignObject></g></g><g transform="translate(2019.1875, 373.75)" class="edgeLabel"><g transform="translate(-72.953125, -9.25)" class="label"><foreignObject height="18.5" width="145.90625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">archival_storage_uri</div></foreignObject></g></g><g transform="translate(2259.0703125, 373.75)" class="edgeLabel"><g transform="translate(-65.71484375, -9.25)" class="label"><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">embedding_model</div></foreignObject></g></g><g transform="translate(2465.34765625, 373.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(2802.60546875, 373.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(3023.85546875, 373.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(3212.96484375, 373.75)"

class="edgeLabel"><g transform="translate(-8.9140625, -9.25)" class="label"><foreignObject height="18.5" width="17.828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">db</div></foreignObject></g></g><g transform="translate(2465.34765625, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(2802.60546875, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(3023.85546875, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(3212.96484375, 475.75)"

class="edgeLabel"><g transform="translate(-24.66796875, -9.25)" class="label"><foreignObject height="18.5"

width="49.3359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">get_all</div></foreignObject></g></g><g transform="translate(3413.6171875, 373.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(3583.8515625, 373.75)"
class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"
width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(3212.96484375, 577.75)"
class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"
width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(3212.96484375, 679.75)"
class="edgeLabel"><g transform="translate(-21.32421875, -9.25)" class="label"><foreignObject height="18.5"
width="42.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">assert</div></foreignObject></g></g><g transform="translate(3598.73046875, 169.75)"
class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(3558.625, 271.75)" class="edgeLabel"><g
transform="translate(-23.078125, -9.25)" class="label"><foreignObject height="18.5" width="46.15625"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">delete</div></foreignObject></g></g><g transform="translate(3772.37109375, 271.75)"
class="edgeLabel"><g transform="translate(-37.1328125, -9.25)" class="label"><foreignObject height="18.5" width="74.265625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">...finished</div></foreignObject></g></g><g transform="translate(3830.234375, 169.75)"
class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(4799.85546875, 169.75)"
class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(4799.85546875, 271.75)"

class="edgeLabel"><g transform="translate(-42.27734375, -9.25)" class="label"><foreignObject height="18.5"
width="84.5546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">config_path</div></foreignObject></g></g><g transform="translate(3715.421875, 373.75)"
class="edgeLabel"><g transform="translate(-79.12890625, -9.25)" class="label"><foreignObject height="18.5"
width="158.2578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">archival_storage_type</div></foreignObject></g></g><g transform="translate(3941.02734375, 373.75)"
class="edgeLabel"><g transform="translate(-72.953125, -9.25)" class="label"><foreignObject height="18.5" width="145.90625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">archival_storage_uri</div></foreignObject></g></g><g transform="translate(4153.921875, 373.75)"
class="edgeLabel"><g transform="translate(-95.5, -9.25)" class="label"><foreignObject height="18.5" width="191"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">embedding_endpoint_type</div></foreignObject></g></g><g transform="translate(4326.40234375,
373.75)" class="edgeLabel"><g transform="translate(-56.98046875, -9.25)" class="label"><foreignObject height="18.5"
width="113.9609375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">embedding_dim</div></foreignObject></g></g><g transform="translate(4469.703125, 373.75)"
class="edgeLabel"><g transform="translate(-65.71484375, -9.25)" class="label"><foreignObject height="18.5"
width="131.4296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">embedding_model</div></foreignObject></g></g><g transform="translate(4675.98046875, 373.75)"
class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(4915.78515625, 373.75)"
class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(5137.03515625, 373.75)"
class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(5352.28125, 373.75)"

class="edgeLabel"><g transform="translate(-8.9140625, -9.25)" class="label"><foreignObject height="18.5" width="17.828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">db</div></foreignObject></g></g><g transform="translate(4675.98046875, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(4915.78515625, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(5137.03515625, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(5352.28125, 475.75)"

class="edgeLabel"><g transform="translate(-24.66796875, -9.25)" class="label"><foreignObject height="18.5"

width="49.3359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">get_all</div></foreignObject></g></g><g transform="translate(5579.0703125, 373.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(5749.3046875, 373.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(5352.28125, 577.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(5352.28125, 679.75)"

class="edgeLabel"><g transform="translate(-21.32421875, -9.25)" class="label"><foreignObject height="18.5"

width="42.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">assert</div></foreignObject></g></g><g transform="translate(5889.18359375, 373.75)"
class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(5654.60546875, 475.75)"
class="edgeLabel"><g transform="translate(-23.078125, -9.25)" class="label"><foreignObject height="18.5" width="46.15625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">delete</div></foreignObject></g></g><g transform="translate(6240.283203125, 475.75)"
class="edgeLabel"><g transform="translate(-37.1328125, -9.25)" class="label"><foreignObject height="18.5" width="74.265625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">...finished</div></foreignObject></g></g><g transform="translate(5912.3203125, 169.75)"
class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(6908.85546875, 169.75)"
class="edgeLabel"><g transform="translate(-19.25, -9.25)" class="label"><foreignObject height="18.5" width="38.5"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">skipif</div></foreignObject></g></g><g transform="translate(6908.85546875, 271.75)"
class="edgeLabel"><g transform="translate(-42.27734375, -9.25)" class="label"><foreignObject height="18.5"
width="84.5546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">config_path</div></foreignObject></g></g><g transform="translate(6020.55078125, 373.75)"
class="edgeLabel"><g transform="translate(-79.12890625, -9.25)" class="label"><foreignObject height="18.5"
width="158.2578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">archival_storage_type</div></foreignObject></g></g><g transform="translate(6222.890625, 373.75)"
class="edgeLabel"><g transform="translate(-72.953125, -9.25)" class="label"><foreignObject height="18.5" width="145.90625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">archival_storage_uri</div></foreignObject></g></g><g transform="translate(6462.7734375, 373.75)"

class="edgeLabel"><g transform="translate(-65.71484375, -9.25)" class="label"><foreignObject height="18.5"

width="131.4296875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">embedding_model</div></foreignObject></g></g><g transform="translate(6669.05078125, 373.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(6908.85546875, 373.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(7130.10546875, 373.75)"

class="edgeLabel"><g transform="translate(-27.71875, -9.25)" class="label"><foreignObject height="18.5" width="55.4375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">passage</div></foreignObject></g></g><g transform="translate(7319.21484375, 373.75)"

class="edgeLabel"><g transform="translate(-8.9140625, -9.25)" class="label"><foreignObject height="18.5" width="17.828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">db</div></foreignObject></g></g><g transform="translate(6669.05078125, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(6908.85546875, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(7130.10546875, 475.75)"

class="edgeLabel"><g transform="translate(-20.53515625, -9.25)" class="label"><foreignObject height="18.5"

width="41.0703125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">insert</div></foreignObject></g></g><g transform="translate(7319.21484375, 475.75)"

class="edgeLabel"><g transform="translate(-24.66796875, -9.25)" class="label"><foreignObject height="18.5"

width="49.3359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">get_all</div></foreignObject></g></g><g transform="translate(7519.8671875, 373.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(7690.1015625, 373.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(7319.21484375, 577.75)"

class="edgeLabel"><g transform="translate(-20.24609375, -9.25)" class="label"><foreignObject height="18.5"

width="40.4921875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">query</div></foreignObject></g></g><g transform="translate(7319.21484375, 679.75)"

class="edgeLabel"><g transform="translate(-21.32421875, -9.25)" class="label"><foreignObject height="18.5"

width="42.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">assert</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(2928.033203125,

16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="188.484375" y="-16.75"

x="-94.2421875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-86.7421875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="173.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Module: test_storage.py</div></foreignObject></g></g><g

transform="translate(33.75, 118.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"

width="30.0625" y="-16.75" x="-15.03125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-7.53125,

-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="15.0625"><div style="display: inline-block; white-space:

nowrap;" xmlns="http://www.w3.org/1999/xhtml">os</div></foreignObject></g></g><g

transform="translate(145.0078125, 118.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5"

width="92.453125" y="-16.75" x="-46.2265625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-38.7265625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="77.453125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">subprocess</div></foreignObject></g></g><g transform="translate(486.162109375, 118.75)"

id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="35.84375" y="-16.75" x="-17.921875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-10.421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="20.84375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">sys</div></foreignObject></g></g><g transform="translate(2710.90625, 118.75)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="59.6953125" y="-16.75" x="-29.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-22.34765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="44.6953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">pytest</div></foreignObject></g></g><g transform="translate(134.578125, 220.75)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="120.9609375" y="-16.75" x="-60.48046875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-52.98046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="105.9609375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">sys.executable</div></foreignObject></g></g><g transform="translate(134.578125, 322.75)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="269.15625" y="-16.75" x="-134.578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-127.078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="254.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">pgvector, psycopg, psycopg2-binary</div></foreignObject></g></g><g transform="translate(354.828125, 220.75)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5" width="120.9609375" y="-16.75" x="-60.48046875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-52.98046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="105.9609375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">sys.executable</div></foreignObject></g></g><g transform="translate(354.828125, 322.75)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5" width="71.34375" y="-16.75" x="-35.671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="56.34375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">lancedb</div></foreignObject></g></g><g transform="translate(2829.54296875, 118.75)"

id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="77.578125" y="-16.75" x="-38.7890625"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-31.2890625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="62.578125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">pgvector</div></foreignObject></g></g><g

transform="translate(3026.5234375, 118.75)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="33.5"

width="216.3828125" y="-16.75" x="-108.19140625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-100.69140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="201.3828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">memgpt.connectors.storage</div></foreignObject></g></g><g transform="translate(3275.42578125,

118.75)" id="flowchart-L-21" class="node default default flowchart-label"><rect height="33.5" width="181.421875" y="-16.75"

x="-90.7109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-83.2109375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="166.421875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">memgpt.connectors.db</div></foreignObject></g></g><g

transform="translate(3498.5078125, 118.75)" id="flowchart-M-23" class="node default default flowchart-label"><rect height="33.5"

width="164.7421875" y="-16.75" x="-82.37109375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-74.87109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="149.7421875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">memgpt.embeddings</div></foreignObject></g></g><g transform="translate(3692.484375, 118.75)"

id="flowchart-N-25" class="node default default flowchart-label"><rect height="33.5" width="123.2109375" y="-16.75"

x="-61.60546875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-54.10546875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="108.2109375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">memgpt.config</div></foreignObject></g></g><g

transform="translate(3842.2890625, 118.75)" id="flowchart-O-27" class="node default default flowchart-label"><rect height="33.5"

width="76.3984375" y="-16.75" x="-38.19921875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-30.69921875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="61.3984375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">argparse</div></foreignObject></g></g><g transform="translate(601.1171875, 220.75)"

id="flowchart-P-29" class="node default default flowchart-label"><rect height="33.5" width="271.6171875" y="-16.75"

x="-135.80859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-128.30859375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="256.6171875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">os.getenv

PGVECTOR_TEST_DB_URL</div></foreignObject></g></g><g transform="translate(890.9453125, 220.75)"

id="flowchart-Q-31" class="node default default flowchart-label"><rect height="33.5" width="208.0390625" y="-16.75"

x="-104.01953125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-96.51953125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="193.0390625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">os.getenv

OPENAI_API_KEY</div></foreignObject></g></g><g transform="translate(1156.875, 220.75)" id="flowchart-R-33"

class="node default default flowchart-label"><rect height="33.5" width="58.7578125" y="-16.75" x="-29.37890625" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-21.87890625, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="43.7578125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">config</div></foreignObject></g></g><g

transform="translate(501.8984375, 322.75)" id="flowchart-S-35" class="node default default flowchart-label"><rect height="33.5"

width="122.796875" y="-16.75" x="-61.3984375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-53.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.796875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MemGPTConfig</div></foreignObject></g></g><g transform="translate(161.44140625, 424.75)"

id="flowchart-T-37" class="node default default flowchart-label"><rect height="33.5" width="74.7734375" y="-16.75"

x="-37.38671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-29.88671875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="59.7734375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">postgres</div></foreignObject></g></g><g

transform="translate(384.63671875, 424.75)" id="flowchart-U-39" class="node default default flowchart-label"><rect height="33.5"

width="271.6171875" y="-16.75" x="-135.80859375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-128.30859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="256.6171875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv

PGVECTOR_TEST_DB_URL</div></foreignObject></g></g><g transform="translate(619.16015625, 424.75)"

id="flowchart-V-41" class="node default default flowchart-label"><rect height="33.5" width="97.4296875" y="-16.75"

x="-48.71484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-41.21484375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="82.4296875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">postgres://</div></foreignObject></g></g><g

transform="translate(747.25390625, 424.75)" id="flowchart-W-43" class="node default default flowchart-label"><rect height="33.5"

width="58.7578125" y="-16.75" x="-29.37890625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-21.87890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="43.7578125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">config</div></foreignObject></g></g><g transform="translate(729.48828125, 322.75)"

id="flowchart-X-45" class="node default default flowchart-label"><rect height="33.5" width="146.4296875" y="-16.75"

x="-73.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.71484375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">embedding_model</div></foreignObject></g></g><g

transform="translate(935.765625, 322.75)" id="flowchart-Y-47" class="node default default flowchart-label"><rect height="33.5"

width="166.125" y="-16.75" x="-83.0625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-75.5625,

-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="151.125"><div style="display: inline-block; white-space:

nowrap;" xmlns="http://www.w3.org/1999/xhtml">This is a test

passage</div></foreignObject></g></g><g transform="translate(1175.5703125, 322.75)" id="flowchart-Z-49" class="node

default default flowchart-label"><rect height="33.5" width="213.484375" y="-16.75" x="-106.7421875" ry="0" rx="0" style=""

class="basic label-container"/><g transform="translate(-99.2421875, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="198.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">This is another test

passage</div></foreignObject></g></g><g transform="translate(1396.8203125, 322.75)" id="flowchart-AA-51" class="node default default flowchart-label"><rect height="33.5" width="129.015625" y="-16.75" x="-64.5078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-57.0078125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="114.015625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Cinderella wept</div></foreignObject></g></g><g transform="translate(1612.06640625, 322.75)" id="flowchart-BB-53" class="node default default flowchart-label"><rect height="33.5" width="201.4765625" y="-16.75" x="-100.73828125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-93.23828125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="186.4765625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">PostgresStorageConnector</div></foreignObject></g></g><g transform="translate(1166.29296875, 424.75)" id="flowchart-CC-55" class="node default default flowchart-label"><rect height="33.5" width="69.6953125" y="-16.75" x="-34.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.34765625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="54.6953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Passage</div></foreignObject></g></g><g transform="translate(1612.06640625, 424.75)" id="flowchart-DD-61" class="node default default flowchart-label"><rect height="33.5" width="32.828125" y="-16.75" x="-16.4140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-8.9140625, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="17.828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">db</div></foreignObject></g></g><g transform="translate(1838.85546875, 322.75)" id="flowchart-EE-63" class="node default default flowchart-label"><rect height="33.5" width="152.1015625" y="-16.75" x="-76.05078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-68.55078125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="137.1015625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">why was she crying</div></foreignObject></g></g><g transform="translate(2009.08984375, 322.75)" id="flowchart-FF-65" class="node default default flowchart-label"><rect height="33.5" width="88.3671875" y="-16.75" x="-44.18359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-36.68359375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="73.3671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">query_vec</div></foreignObject></g></g><g transform="translate(1612.06640625, 526.75)"

id="flowchart-GG-67" class="node default default flowchart-label"><rect height="33.5" width="75.9140625" y="-16.75"

x="-37.95703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-30.45703125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="60.9140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">2 results</div></foreignObject></g></g><g

transform="translate(1612.06640625, 628.75)" id="flowchart-HH-69" class="node default default flowchart-label"><rect height="33.5"

width="126.6484375" y="-16.75" x="-63.32421875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-55.82421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="111.6484375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">'wept' in

results</div></foreignObject></g></g><g transform="translate(2136.15625, 220.75)" id="flowchart-II-71" class="node default

default flowchart-label"><rect height="33.5" width="91.390625" y="-16.75" x="-45.6953125" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-38.1953125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="76.390625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">deleting...</div></foreignObject></g></g><g transform="translate(2136.15625, 322.75)"

id="flowchart-JJ-73" class="node default default flowchart-label"><rect height="33.5" width="32.828125" y="-16.75" x="-16.4140625"

ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-8.9140625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="17.828125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">db</div></foreignObject></g></g><g

transform="translate(2348.51953125, 220.75)" id="flowchart-KK-77" class="node default default flowchart-label"><rect height="33.5"

width="233.3359375" y="-16.75" x="-116.66796875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-109.16796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="218.3359375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv

LANCEDB_TEST_URL</div></foreignObject></g></g><g transform="translate(2619.20703125, 220.75)"

id="flowchart-LL-79" class="node default default flowchart-label"><rect height="33.5" width="208.0390625" y="-16.75"

x="-104.01953125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-96.51953125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="193.0390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">os.getenv
OPENAI_API_KEY</div></foreignObject></g></g><g transform="translate(2802.60546875, 220.75)" id="flowchart-MM-81"
class="node default default flowchart-label"><rect height="33.5" width="58.7578125" y="-16.75" x="-29.37890625" ry="0" rx="0"
style="" class="basic label-container"/><g transform="translate(-21.87890625, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="43.7578125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">config</div></foreignObject></g></g><g
transform="translate(2802.60546875, 322.75)" id="flowchart-NN-83" class="node default default flowchart-label"><rect height="33.5"
width="122.796875" y="-16.75" x="-61.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-53.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">MemGPTConfig</div></foreignObject></g></g><g transform="translate(1816.84765625, 424.75)"
id="flowchart-OO-85" class="node default default flowchart-label"><rect height="33.5" width="71.34375" y="-16.75" x="-35.671875"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.171875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="56.34375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">lancedb</div></foreignObject></g></g><g
transform="translate(2019.1875, 424.75)" id="flowchart-PP-87" class="node default default flowchart-label"><rect height="33.5"
width="233.3359375" y="-16.75" x="-116.66796875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-109.16796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="218.3359375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv
LANCEDB_TEST_URL</div></foreignObject></g></g><g transform="translate(2259.0703125, 424.75)"
id="flowchart-QQ-89" class="node default default flowchart-label"><rect height="33.5" width="146.4296875" y="-16.75"
x="-73.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.71484375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">embedding_model</div></foreignObject></g></g><g
transform="translate(2465.34765625, 424.75)" id="flowchart-RR-91" class="node default default flowchart-label"><rect height="33.5"

width="166.125" y="-16.75" x="-83.0625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-75.5625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="151.125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">This is a test passage</div></foreignObject></g></g><g transform="translate(2802.60546875, 424.75)" id="flowchart-SS-93" class="node default default flowchart-label"><rect height="33.5" width="213.484375" y="-16.75" x="-106.7421875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-99.2421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="198.484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">This is another test passage</div></foreignObject></g></g><g transform="translate(3023.85546875, 424.75)" id="flowchart-TT-95" class="node default default flowchart-label"><rect height="33.5" width="129.015625" y="-16.75" x="-64.5078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-57.0078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="114.015625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Cinderella wept</div></foreignObject></g></g><g transform="translate(3212.96484375, 424.75)" id="flowchart-UU-97" class="node default default flowchart-label"><rect height="33.5" width="149.203125" y="-16.75" x="-74.6015625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.1015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="134.203125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">LanceDBConnector</div></foreignObject></g></g><g transform="translate(2793.328125, 526.75)" id="flowchart-VV-99" class="node default default flowchart-label"><rect height="33.5" width="69.6953125" y="-16.75" x="-34.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.34765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="54.6953125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Passage</div></foreignObject></g></g><g transform="translate(3212.96484375, 526.75)" id="flowchart-WW-105" class="node default default flowchart-label"><rect height="33.5" width="32.828125" y="-16.75" x="-16.4140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-8.9140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="17.828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">db</div></foreignObject></g></g><g transform="translate(3413.6171875, 424.75)" id="flowchart-XX-107"

class="node default default flowchart-label"><rect height="33.5" width="152.1015625" y="-16.75" x="-76.05078125" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-68.55078125, -9.25)" style="" class="label"><rect/></foreignObject

height="18.5" width="137.1015625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">why was she crying</div></foreignObject></g></g><g

transform="translate(3583.8515625, 424.75)" id="flowchart-YY-109" class="node default default flowchart-label"><rect height="33.5"

width="88.3671875" y="-16.75" x="-44.18359375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-36.68359375, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="73.3671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">query_vec</div></foreignObject></g></g><g transform="translate(3212.96484375, 628.75)"

id="flowchart-ZZ-111" class="node default default flowchart-label"><rect height="33.5" width="75.9140625" y="-16.75"

x="-37.95703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-30.45703125, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="60.9140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">2 results</div></foreignObject></g></g><g

transform="translate(3212.96484375, 730.75)" id="flowchart-AAA-113" class="node default default flowchart-label"><rect

height="33.5" width="126.6484375" y="-16.75" x="-63.32421875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-55.82421875, -9.25)" style="" class="label"><rect/></foreignObject height="18.5" width="111.6484375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">'wept' in

results</div></foreignObject></g></g><g transform="translate(3598.73046875, 220.75)" id="flowchart-BBB-115" class="node

default default flowchart-label"><rect height="33.5" width="91.390625" y="-16.75" x="-45.6953125" ry="0" rx="0" style="" class="basic

label-container"/><g transform="translate(-38.1953125, -9.25)" style="" class="label"><rect/></foreignObject height="18.5"

width="76.390625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">deleting...</div></foreignObject></g></g><g transform="translate(3598.73046875, 322.75)"

id="flowchart-CCC-117" class="node default default flowchart-label"><rect height="33.5" width="32.828125" y="-16.75"

x="-16.4140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-8.9140625, -9.25)" style=""

class="label"><rect/></foreignObject height="18.5" width="17.828125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">db</div></foreignObject></g></g><g
transform="translate(3830.234375, 220.75)" id="flowchart-DDD-121" class="node default default flowchart-label"><rect height="33.5"
width="271.6171875" y="-16.75" x="-135.80859375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-128.30859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="256.6171875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv
PGVECTOR_TEST_DB_URL</div></foreignObject></g></g><g transform="translate(4799.85546875, 220.75)"
id="flowchart-EEE-123" class="node default default flowchart-label"><rect height="33.5" width="58.7578125" y="-16.75"
x="-29.37890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-21.87890625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="43.7578125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">config</div></foreignObject></g></g><g
transform="translate(4799.85546875, 322.75)" id="flowchart-FFF-125" class="node default default flowchart-label"><rect
height="33.5" width="122.796875" y="-16.75" x="-61.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-53.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">MemGPTConfig</div></foreignObject></g></g><g transform="translate(3715.421875, 424.75)"
id="flowchart-GGG-127" class="node default default flowchart-label"><rect height="33.5" width="74.7734375" y="-16.75"
x="-37.38671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-29.88671875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="59.7734375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">postgres</div></foreignObject></g></g><g
transform="translate(3941.02734375, 424.75)" id="flowchart-HHH-129" class="node default default flowchart-label"><rect
height="33.5" width="276.4375" y="-16.75" x="-138.21875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-130.71875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="261.4375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv
PGVECTOR_TEST_DB_URL</div></foreignObject></g></g><g transform="translate(4153.921875, 424.75)"
id="flowchart-III-131" class="node default default flowchart-label"><rect height="33.5" width="49.3515625" y="-16.75"
x="-24.67578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-17.17578125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="34.3515625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">local</div></foreignObject></g></g><g

transform="translate(4326.40234375, 424.75)" id="flowchart-JJJ-133" class="node default default flowchart-label"><rect height="33.5"

width="40.171875" y="-16.75" x="-20.0859375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-12.5859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="25.171875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">384</div></foreignObject></g></g><g transform="translate(4469.703125, 424.75)"

id="flowchart-KKK-135" class="node default default flowchart-label"><rect height="33.5" width="146.4296875" y="-16.75"

x="-73.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.71484375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">embedding_model</div></foreignObject></g></g><g

transform="translate(4675.98046875, 424.75)" id="flowchart-LLL-137" class="node default default flowchart-label"><rect

height="33.5" width="166.125" y="-16.75" x="-83.0625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-75.5625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="151.125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">This is a test

passage</div></foreignObject></g></g><g transform="translate(4915.78515625, 424.75)" id="flowchart-MMM-139"

class="node default default flowchart-label"><rect height="33.5" width="213.484375" y="-16.75" x="-106.7421875" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-99.2421875, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="198.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">This is another test

passage</div></foreignObject></g></g><g transform="translate(5137.03515625, 424.75)" id="flowchart-NNN-141"

class="node default default flowchart-label"><rect height="33.5" width="129.015625" y="-16.75" x="-64.5078125" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-57.0078125, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="114.015625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Cinderella wept</div></foreignObject></g></g><g

transform="translate(5352.28125, 424.75)" id="flowchart-OOO-143" class="node default default flowchart-label"><rect height="33.5"

width="201.4765625" y="-16.75" x="-100.73828125" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-93.23828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="186.4765625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">PostgresStorageConnector</div></foreignObject></g></g><g transform="translate(4906.5078125,

526.75)" id="flowchart-PPP-145" class="node default default flowchart-label"><rect height="33.5" width="69.6953125" y="-16.75"

x="-34.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.34765625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="54.6953125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Passage</div></foreignObject></g></g><g

transform="translate(5352.28125, 526.75)" id="flowchart-QQQ-151" class="node default default flowchart-label"><rect height="33.5"

width="32.828125" y="-16.75" x="-16.4140625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-8.9140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="17.828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">db</div></foreignObject></g></g><g transform="translate(5579.0703125, 424.75)"

id="flowchart-RRR-153" class="node default default flowchart-label"><rect height="33.5" width="152.1015625" y="-16.75"

x="-76.05078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-68.55078125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="137.1015625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">why was she crying</div></foreignObject></g></g><g

transform="translate(5749.3046875, 424.75)" id="flowchart-SSS-155" class="node default default flowchart-label"><rect height="33.5"

width="88.3671875" y="-16.75" x="-44.18359375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-36.68359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="73.3671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">query_vec</div></foreignObject></g></g><g transform="translate(5352.28125, 628.75)"

id="flowchart-TTT-157" class="node default default flowchart-label"><rect height="33.5" width="75.9140625" y="-16.75"

x="-37.95703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-30.45703125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="60.9140625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">2 results</div></foreignObject></g></g><g

transform="translate(5352.28125, 730.75)" id="flowchart-UUU-159" class="node default default flowchart-label"><rect height="33.5" width="126.6484375" y="-16.75" x="-63.32421875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-55.82421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="111.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">'wept' in results</div></foreignObject></g></g><g transform="translate(5889.18359375, 424.75)" id="flowchart-VVV-161" class="node default default flowchart-label"><rect height="33.5" width="91.390625" y="-16.75" x="-45.6953125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.1953125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="76.390625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">deleting...</div></foreignObject></g></g><g transform="translate(5889.18359375, 526.75)" id="flowchart-WWW-163" class="node default default flowchart-label"><rect height="33.5" width="32.828125" y="-16.75" x="-16.4140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-8.9140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="17.828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">db</div></foreignObject></g></g><g transform="translate(5912.3203125, 220.75)" id="flowchart-XXX-167" class="node default default flowchart-label"><rect height="33.5" width="233.3359375" y="-16.75" x="-116.66796875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-109.16796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="218.3359375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv LANCEDB_TEST_URL</div></foreignObject></g></g><g transform="translate(6908.85546875, 220.75)" id="flowchart-YYY-169" class="node default default flowchart-label"><rect height="33.5" width="58.7578125" y="-16.75" x="-29.37890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-21.87890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="43.7578125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">config</div></foreignObject></g></g><g transform="translate(6908.85546875, 322.75)" id="flowchart-ZZZ-171" class="node default default flowchart-label"><rect height="33.5" width="122.796875" y="-16.75" x="-61.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">MemGPTConfig</div></foreignObject></g></g><g transform="translate(6020.55078125, 424.75)"

id="flowchart-AAAA-173" class="node default default flowchart-label"><rect height="33.5" width="71.34375" y="-16.75"

x="-35.671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.171875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="56.34375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">lancedb</div></foreignObject></g></g><g

transform="translate(6222.890625, 424.75)" id="flowchart-BBBB-175" class="node default default flowchart-label"><rect

height="33.5" width="233.3359375" y="-16.75" x="-116.66796875" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-109.16796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="218.3359375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">os.getenv

LANCEDB_TEST_URL</div></foreignObject></g></g><g transform="translate(6462.7734375, 424.75)"

id="flowchart-CCCC-177" class="node default default flowchart-label"><rect height="33.5" width="146.4296875" y="-16.75"

x="-73.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.71484375, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="131.4296875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">embedding_model</div></foreignObject></g></g><g

transform="translate(6669.05078125, 424.75)" id="flowchart-DDDD-179" class="node default default flowchart-label"><rect

height="33.5" width="166.125" y="-16.75" x="-83.0625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-75.5625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="151.125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">This is a test

passage</div></foreignObject></g></g><g transform="translate(6908.85546875, 424.75)" id="flowchart-EEEE-181"

class="node default default flowchart-label"><rect height="33.5" width="213.484375" y="-16.75" x="-106.7421875" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-99.2421875, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="198.484375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">This is another test

passage</div></foreignObject></g></g><g transform="translate(7130.10546875, 424.75)" id="flowchart-FFFF-183"

class="node default default flowchart-label"><rect height="33.5" width="129.015625" y="-16.75" x="-64.5078125" ry="0" rx="0"

style="" class="basic label-container"/><g transform="translate(-57.0078125, -9.25)" style="" class="label"><rect/><foreignObject

height="18.5" width="114.015625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Cinderella wept</div></foreignObject></g></g><g

transform="translate(7319.21484375, 424.75)" id="flowchart-GGGG-185" class="node default default flowchart-label"><rect

height="33.5" width="149.203125" y="-16.75" x="-74.6015625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-67.1015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="134.203125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">LanceDBConnector</div></foreignObject></g></g><g transform="translate(6899.578125, 526.75)"

id="flowchart-HHHH-187" class="node default default flowchart-label"><rect height="33.5" width="69.6953125" y="-16.75"

x="-34.84765625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-27.34765625, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="54.6953125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Passage</div></foreignObject></g></g><g

transform="translate(7319.21484375, 526.75)" id="flowchart-IIII-193" class="node default default flowchart-label"><rect height="33.5"

width="32.828125" y="-16.75" x="-16.4140625" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-8.9140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="17.828125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">db</div></foreignObject></g></g><g transform="translate(7519.8671875, 424.75)"

id="flowchart-JJJJ-195" class="node default default flowchart-label"><rect height="33.5" width="152.1015625" y="-16.75"

x="-76.05078125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-68.55078125, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="137.1015625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">why was she crying</div></foreignObject></g></g><g

transform="translate(7690.1015625, 424.75)" id="flowchart-KKKK-197" class="node default default flowchart-label"><rect

height="33.5" width="88.3671875" y="-16.75" x="-44.18359375" ry="0" rx="0" style="" class="basic label-container"/><g

transform="translate(-36.68359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="73.3671875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">query_vec</div></foreignObject></g></g><g transform="translate(7319.21484375, 628.75)"

id="flowchart-LLLL-199" class="node default default flowchart-label"><rect height="33.5" width="75.9140625" y="-16.75"

```

x="-37.95703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-30.45703125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="60.9140625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">2 results</span></div></foreignObject></g></g><g
transform="translate(7319.21484375, 730.75)" id="flowchart-MMMM-201" class="node default default flowchart-label"><rect
height="33.5" width="126.6484375" y="-16.75" x="-63.32421875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-55.82421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="111.6484375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">'wept' in
results</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-63.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-63.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1843.578125 383.5" style="max-width:
1843.58px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

```

```

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,142L59.0546875,142C71.3125,142,95.828125,142,119.46041666666667,142C143.09270833333332,142,165.8416
6666666667,142,177.21614583333334,142L188.590625,142"/><path marker-end="url(#my-svg_flowchart-pointEnd)"
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

```

d="M339.3375280688623,125.25L355.22528380738527,121.08333333333333C371.1130395459082,116.91666666666667,402.888
5510229541,108.58333333333333,430.8291713448104,104.41666666666667C458.76979166666666,100.25,482.87552083333334,1
00.25,494.9283854166667,100.25L506.98125,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

d="M339.3375280688623,158.75L355.22528380738527,162.91666666666666C371.1130395459082,167.08333333333334,402.888
5510229541,175.41666666666666,438.8838588448104,179.58333333333334C474.87916666666666,183.75,515.09427083333333,1
83.75,535.2018229166666,183.75L555.309375,183.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-E" id="L-D-E-0"

d="M643.1505426646706,167L675.1156865955589,141.95833333333334C707.0808305264471,116.91666666666667,771.0111183
882236,66.83333333333333,826.3839446107785,41.79166666666666C881.7567708333332,16.75,928.5721354166667,16.75,951
.9798177083334,16.75L975.3875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-F" id="L-D-F-0"

d="M664.5315540793413,167L692.9331961077845,155.875C721.3348381362275,144.75,778.1381221931138,122.5,829.05877463
82236,111.375C879.9794270833332,100.25,925.0174479166667,100.25,947.5364583333334,100.25L970.05546875,100.25"/><pat
h marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-D LE-G" id="L-D-G-0"

d="M682.9296875,183.75L708.2649739583334,183.75C733.6002604166666,183.75,784.2708333333334,183.75,832.59908854166
67,183.75C880.92734375,183.75,926.9132812500001,183.75,949.90625,183.75L972.89921875,183.75"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-H" id="L-D-H-0"

d="M664.5315540793413,200.5L692.9331961077845,211.625C721.3348381362275,222.75,778.1381221931138,245,830.00799338
82236,256.125C881.8778645833332,267.25,928.8143229166667,267.25,952.2825520833334,267.25L975.75078125,267.25"/><pat
h marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-D LE-I" id="L-D-I-0"

d="M643.1505426646706,200.5L675.1156865955589,225.54166666666666C707.0808305264471,250.58333333333334,771.01111
83882236,300.6666666666667,819.3735279441117,325.7083333333333C867.7359375,350.75,900.5304687500001,350.75,916.92

7734375,350.75L933.325,350.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-J" id="L-I-J-0"

d="M1088.890625,350.75L1097.0104166666667,350.75C1105.1302083333333,350.75,1121.3697916666667,350.75,1136.7260416

666666,350.75C1152.0822916666666,350.75,1166.5552083333334,350.75,1173.7916666666667,350.75L1181.028125,350.75"/><

path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-J LE-K" id="L-J-K-0"

d="M1287.625,350.75L1294.6282552083333,350.75C1301.6315104166667,350.75,1315.6380208333333,350.75,1328.7611979166

666,350.75C1341.8843749999999,350.75,1354.12421875,350.75,1360.244140625,350.75L1366.3640625,350.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-K

LE-L" id="L-K-L-0"

d="M1533.4453125,350.75L1540.78515625,350.75C1548.125,350.75,1562.8046875,350.75,1576.6010416666668,350.75C1590.39

7395833333,350.75,1603.3104166666665,350.75,1609.7669270833333,350.75L1616.2234375,350.75"/></g><g

class="edgeLabels"><g transform="translate(120.34375, 142)" class="edgeLabel"><g transform="translate(-48.546875, -9.25)"

class="label"><foreignObject height="18.5" width="97.09375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Send Message</div></foreignObject></g></g><g

transform="translate(434.6640625, 100.25)" class="edgeLabel"><g transform="translate(-52.6171875, -9.25)"

class="label"><foreignObject height="18.5" width="105.234375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Register Client</div></foreignObject></g></g><g

transform="translate(434.6640625, 183.75)" class="edgeLabel"><g transform="translate(-46.60546875, -9.25)"

class="label"><foreignObject height="18.5" width="93.2109375"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Create Agent</div></foreignObject></g></g><g

transform="translate(834.94140625, 16.75)" class="edgeLabel"><g transform="translate(-37.53125, -9.25)"

class="label"><foreignObject height="18.5" width="75.0625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Use Preset</div></foreignObject></g></g><g

transform="translate(834.94140625, 100.25)" class="edgeLabel"><g transform="translate(-60.4765625, -9.25)"

class="label"><foreignObject height="18.5" width="120.953125"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Get Persona Text</div></foreignObject></g></g><g
transform="translate(834.94140625, 183.75)" class="edgeLabel"><g transform="translate(-57.6328125, -9.25)"
class="label"><foreignObject height="18.5" width="115.265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Get Human Text</div></foreignObject></g></g><g
transform="translate(834.94140625, 267.25)" class="edgeLabel"><g transform="translate(-78.68359375, -9.25)"
class="label"><foreignObject height="18.5" width="157.3671875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Package User Message</div></foreignObject></g></g><g
transform="translate(834.94140625, 350.75)" class="edgeLabel"><g transform="translate(-44.58203125, -9.25)"
class="label"><foreignObject height="18.5" width="89.1640625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Step Method</div></foreignObject></g></g><g
transform="translate(1137.609375, 350.75)" class="edgeLabel"><g transform="translate(-23.71875, -9.25)"
class="label"><foreignObject height="18.5" width="47.4375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Return</div></foreignObject></g></g><g
transform="translate(1329.64453125, 350.75)" class="edgeLabel"><g transform="translate(-17.01953125, -9.25)"
class="label"><foreignObject height="18.5" width="34.0390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Print</div></foreignObject></g></g><g
transform="translate(1577.484375, 350.75)" class="edgeLabel"><g transform="translate(-19.0390625, -9.25)"
class="label"><foreignObject height="18.5" width="38.078125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Close</div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(23.3984375, 142)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User</div></foreignObject></g></g><g transform="translate(275.46875, 142)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="163.15625" y="-16.75" x="-81.578125" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-74.078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="148.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">WebSocket Interface</div></foreignObject></g></g><g transform="translate(621.76953125, 100.25)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="218.9765625" y="-16.75" x="-109.48828125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-101.98828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="203.9765625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Mock WebSocket Connection</div></foreignObject></g></g><g transform="translate(621.76953125, 183.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5" width="122.3203125" y="-16.75" x="-61.16015625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.66015625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.3203125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">MemGPT Agent</div></foreignObject></g></g><g transform="translate(1013.7578125, 16.75)" id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="66.140625" y="-16.75" x="-33.0703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-25.5703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="51.140625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Presets</div></foreignObject></g></g><g transform="translate(1013.7578125, 100.25)" id="flowchart-F-9" class="node default default flowchart-label"><rect height="33.5" width="76.8046875" y="-16.75" x="-38.40234375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-30.90234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="61.8046875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Personas</div></foreignObject></g></g><g transform="translate(1013.7578125, 183.75)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="71.1171875" y="-16.75" x="-35.55859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-28.05859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="56.1171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Humans</div></foreignObject></g></g><g transform="translate(1013.7578125, 267.25)" id="flowchart-H-13" class="node default default flowchart-label"><rect height="33.5" width="65.4140625" y="-16.75"

427.805px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"

id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg

.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg

.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg

.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg

.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg

p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node

path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

```
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-user LE-websocket" id="L-user-websocket-0"
d="M226.7467352175245,33.5L221.12781320210377,39.208333333333336C215.50889118668297,44.916666666666664,204.2710
471558415,56.333333333333336,203.65138581638448,67.12047827506899C203.03172447692745,77.90762321680465,213.0302
4582885493,88.06524643360929,218.02950650481864,93.14405804201164L223.02876718078238,98.22286965041395"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-websocket LE-server" id="L-websocket-server-0"
d="M196.79296875,131.82187668427292L174.33463541666666,138.14323057022742C151.87630208333334,144.4645844561819
4,106.95963541666667,157.10729222809098,103.93141992649915,168.89764726873713C100.90320443633162,180.6880023093
8334,139.76344012266324,191.62600461876664,159.19355796582906,197.0950057734583L178.62367580899485,202.56400692
814998"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-server LE-websocket" id="L-server-websocket-0"
d="M259.853515625,204L265.5172526041667,198.29166666666666C271.1809895833333,192.58333333333334,282.50846354166
67,181.16666666666666,283.1306202928891,170.3770556232793C283.7527770441115,159.5874445798919,273.6696165882229
4,149.42488915978376,268.6280363602787,144.3436114497297L263.58645613233443,139.26233373967565"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-websocket LE-server" id="L-websocket-server-1"
```

d="M226.615234375,135.5L220.95149739583334,141.20833333333334C215.28776041666666,146.91666666666666,203.9602864
5833334,158.33333333333334,203.33812970711094,169.1229443767207C202.71597295588853,179.9125554201081,212.799133
41177704,190.0751108402162,217.84071363972132,195.1563885502703L222.88229386766557,200.23766626032435"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-server LE-websocket" id="L-server-websocket-1"

d="M287.87281709558823,204L303.08542049632354,198.29166666666666C318.29802389705884,192.58333333333334,348.7232
3069852945,181.16666666666666,349.55025698423833,170.06033095321652C350.3772832699472,158.95399523976639,321.60
612903989454,148.15799047953277,307.2205519248682,142.75998809941595L292.8349748098418,137.36198571929916"/><pat
h marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-websocket LE-user" id="L-websocket-user-0"

d="M259.72201478247547,102L265.34093679789623,96.29166666666667C270.959858813317,90.58333333333333,282.19770284
41585,79.16666666666667,282.81736418361555,68.37952172493101C283.4370255230725,57.592376783195355,273.438504171
14504,47.4347535663907,268.4392434951813,42.35594195798837L263.43998281921756,37.277130349586045"/></g><g
class="edgeLabels"><g transform="translate(193.033203125, 67.75)" class="edgeLabel"><g transform="translate(-47.74609375,
-9.25)" class="label"><foreignObject height="18.5" width="95.4921875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Send Request</div></foreignObject></g></g><g
transform="translate(62.04296875, 169.75)" class="edgeLabel"><g transform="translate(-62.04296875, -9.25)"
class="label"><foreignObject height="18.5" width="124.0859375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Initialize Request</div></foreignObject></g></g><g
transform="translate(293.8359375, 169.75)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"
class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Response</div></foreignObject></g></g><g
transform="translate(192.6328125, 169.75)" class="edgeLabel"><g transform="translate(-48.546875, -9.25)"
class="label"><foreignObject height="18.5" width="97.09375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Send Message</div></foreignObject></g></g><g
transform="translate(379.1484375, 169.75)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"

```

class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Response</span></div></foreignObject></g></g><g
transform="translate(293.435546875, 67.75)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)"
class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Response</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(243.234375, 16.75)" id="flowchart-user-0" class="node default default flowchart-label"><rect
height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">User</span></div></foreignObject></g></g><g transform="translate(243.234375, 118.75)"
id="flowchart-websocket-1" class="node default default flowchart-label"><rect height="33.5" width="92.8828125" y="-16.75"
x="-46.44140625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-38.94140625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="77.8828125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">WebSocket</span></div></foreignObject></g></g><g
transform="translate(243.234375, 220.75)" id="flowchart-server-3" class="node default default flowchart-label"><rect height="33.5"
width="138.3046875" y="-16.75" x="-69.15234375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-61.65234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="123.3046875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">WebSocketServer</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-65.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-65.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 307.0859375 2533.28125"
style="max-width: 307.086px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg

```



```
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
```

```
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-id1 LE-id2" id="L-id1-id2-0"
d="M145.54296875,48.7890625L145.54296875,52.955729166666664C145.54296875,57.122395833333336,145.54296875,65.4557
2916666667,145.54296875,72.90572916666666C145.54296875,80.35572916666666,145.54296875,86.92239583333333,145.5429
6875,90.20572916666667L145.54296875,93.4890625"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-id2 LE-id3" id="L-id2-id3-0"
d="M145.54296875,132.2890625L145.54296875,136.45572916666666C145.54296875,140.62239583333334,145.54296875,148.95
572916666666,145.60898515047458,156.48923225753654C145.67500155094913,164.02273534840646,145.8070343518983,170.
7564081968129,145.87305075237285,174.12324462101614L145.93906715284743,177.49008104521937"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-id3 LE-id4" id="L-id3-id4-0"
d="M146.04296875,396.7421875L145.95963541666666,400.82552083333333C145.87630208333334,404.9088541666667,145.7096
3541666666,413.0755208333333,145.6923184838079,420.52569059086994C145.67500155094913,427.97586034840646,145.807
0343518983,434.70953319681286,145.87305075237285,438.0763696210161L145.93906715284743,441.44320604521937"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-id4 LE-id5" id="L-id4-id5-0"
d="M146.04296875,587.3125L145.95963541666666,591.39583333333334C145.87630208333334,595.4791666666666,145.7096354
1666666,603.6458333333334,145.6923184838079,611.0960030908699C145.67500155094913,618.5461728484064,145.80703435
18983,625.2798456968129,145.87305075237285,628.646682121016L145.93906715284743,632.0135185452193"/><path
```

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-id5 LE-id6" id="L-id5-id6-0"

d="M146.04296875,806.828125L145.95963541666666,810.91145833333334C145.87630208333334,814.9947916666666,145.70963541666666,823.16145833333334,145.6923184838079,830.6116280908699C145.67500155094913,838.0617978484064,145.8070343518983,844.7954706968129,145.87305075237285,848.162307121016L145.93906715284743,851.5291435452193"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-id6 LE-id7" id="L-id6-id7-0"

d="M146.04296875,1011.75L145.95963541666666,1015.8333333333333C145.87630208333334,1019.9166666666666,145.70963541666666,1028.0833333333333,145.6923184838079,1035.5335030908698C145.67500155094913,1042.9836728484063,145.8070343518983,1049.7173456968128,145.87305075237285,1053.084182121016L145.93906715284743,1056.4510185452193"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-id7 LE-id8" id="L-id7-id8-0"

d="M146.04296875,1226.015625L145.95963541666666,1230.0989583333333C145.87630208333334,1234.1822916666667,145.70963541666666,1242.3489583333333,145.6923184838079,1249.7991280908698C145.67500155094913,1257.2492978484063,145.8070343518983,1263.9829706968128,145.87305075237285,1267.349807121016L145.93906715284743,1270.7166435452193"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-id8 LE-id9" id="L-id8-id9-0"

d="M146.04296875,1467.96875L145.95963541666666,1472.0520833333333C145.87630208333334,1476.1354166666667,145.70963541666666,1484.3020833333333,145.6923184838079,1491.75225309087C145.67500155094913,1499.2024228484063,145.8070343518983,1505.9360956968128,145.87305075237285,1509.302932121016L145.93906715284743,1512.6697685452193"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-id9 LE-id10" id="L-id9-id10-0"

d="M146.04296875,1669.359375L145.95963541666666,1673.4427083333333C145.87630208333334,1677.5260416666667,145.70963541666666,1685.6927083333333,145.6923184838079,1693.14287809087C145.67500155094913,1700.5930478484063,145.8070343518983,1707.3267206968128,145.87305075237285,1710.693557121016L145.93906715284743,1714.0603935452193"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link


```
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(145.54296875,
24.39453125)" id="flowchart-id1-0" class="node default default flowchart-label"><circle height="33.5" width="48.7890625"
r="24.39453125" ry="0" rx="0" style=""/><g transform="translate(-16.89453125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="33.7890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">start</span></div></foreignObject></g></g><g
transform="translate(145.54296875, 115.5390625)" id="flowchart-id2-1" class="node default default flowchart-label"><rect
height="33.5" width="145.84375" y="-16.75" x="-72.921875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-65.421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="130.84375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">memgpt
configure</span></div></foreignObject></g></g><g transform="translate(145.54296875, 289.265625)" id="flowchart-id3-3"
class="node default default flowchart-label"><polygon style="" transform="translate(-106.9765625,106.9765625)"
class="label-container" points="106.9765625,0 213.953125,-106.9765625 106.9765625,-213.953125 0,-106.9765625"/><g
transform="translate(-82.7265625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="165.453125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">LLM inference
```

provider</div></foreignObject></g></g><g transform="translate(145.54296875, 516.52734375)" id="flowchart-id4-5"

class="node default default flowchart-label"><polygon style="" transform="translate(-70.28515625,70.28515625)"

class="label-container" points="70.28515625,0 140.5703125,-70.28515625 70.28515625,-140.5703125 0,-70.28515625"/><g

transform="translate(-46.03515625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="92.0703125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">LLM

backend</div></foreignObject></g></g><g transform="translate(145.54296875, 721.5703125)" id="flowchart-id5-7"

class="node default default flowchart-label"><polygon style="" transform="translate(-84.7578125,84.7578125)"

class="label-container" points="84.7578125,0 169.515625,-84.7578125 84.7578125,-169.515625 0,-84.7578125"/><g

transform="translate(-60.5078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="121.015625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Default

endpoint</div></foreignObject></g></g><g transform="translate(145.54296875, 933.7890625)" id="flowchart-id6-9"

class="node default default flowchart-label"><polygon style="" transform="translate(-77.4609375,77.4609375)"

class="label-container" points="77.4609375,0 154.921875,-77.4609375 77.4609375,-154.921875 0,-77.4609375"/><g

transform="translate(-53.2109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="106.421875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Model

wrapper</div></foreignObject></g></g><g transform="translate(145.54296875, 1143.3828125)" id="flowchart-id7-11"

class="node default default flowchart-label"><polygon style="" transform="translate(-82.1328125,82.1328125)"

class="label-container" points="82.1328125,0 164.265625,-82.1328125 82.1328125,-164.265625 0,-82.1328125"/><g

transform="translate(-57.8828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="115.765625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Context

window</div></foreignObject></g></g><g transform="translate(145.54296875, 1371.4921875)" id="flowchart-id8-13"

class="node default default flowchart-label"><polygon style="" transform="translate(-95.9765625,95.9765625)"

class="label-container" points="95.9765625,0 191.953125,-95.9765625 95.9765625,-191.953125 0,-95.9765625"/><g

transform="translate(-71.7265625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="143.453125"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Embedding

provider</div></foreignObject></g></g><g transform="translate(145.54296875, 1593.1640625)" id="flowchart-id9-15"

```

class="node default default flowchart-label"><polygon style="" transform="translate(-75.6953125,75.6953125)"

class="label-container" points="75.6953125,0 151.390625,-75.6953125 75.6953125,-151.390625 0,-75.6953125"/><g

transform="translate(-51.4453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="102.890625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Default

preset</span></div></foreignObject></g></g><g transform="translate(145.54296875, 1799.88671875)" id="flowchart-id10-17"

class="node default default flowchart-label"><polygon style="" transform="translate(-81.02734375,81.02734375)"

class="label-container" points="81.02734375,0 162.0546875,-81.02734375 81.02734375,-162.0546875 0,-81.02734375"/><g

transform="translate(-56.77734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="113.5546875"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Default

persona</span></div></foreignObject></g></g><g transform="translate(145.54296875, 2007.86328125)" id="flowchart-id11-19"

class="node default default flowchart-label"><polygon style="" transform="translate(-76.94921875,76.94921875)"

class="label-container" points="76.94921875,0 153.8984375,-76.94921875 76.94921875,-153.8984375 0,-76.94921875"/><g

transform="translate(-52.69921875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="105.3984375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Default

human</span></div></foreignObject></g></g><g transform="translate(145.54296875, 2280.35546875)" id="flowchart-id12-21"

class="node default default flowchart-label"><polygon style="" transform="translate(-145.54296875,145.54296875)"

class="label-container" points="145.54296875,0 291.0859375,-145.54296875 145.54296875,-291.0859375 0,-145.54296875"/><g

transform="translate(-121.29296875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="242.5859375"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Storage

backend for archival data</span></div></foreignObject></g></g><g transform="translate(145.54296875, 2496.58984375)"

id="flowchart-id13-23" class="node default default flowchart-label"><circle height="33.5" width="41.3828125" r="20.69140625" ry="0"

rx="0" style=""><g transform="translate(-13.19140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"

width="26.3828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="nodeLabel">end</span></div></foreignObject></g></g></g></g></g></svg>

```

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-66.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 745.45703125 216.5" style="max-width: 745.457px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg .edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg .edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg .marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg .cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node .label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath .path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg .edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg .cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid #aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg .flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0 10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5" viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
```



```
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M322.60546875,21.869093717672715L281.744140625,27.974244764727263C240.8828125,34.07939581178181,159.16015625,
46.289697905890904,118.298828125,55.67818228627879C77.4375,65.06666666666666,77.4375,71.63333333333334,77.4375,74.
91666666666667L77.4375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-F" id="L-B-F-0"
d="M77.4375,117L77.4375,121.16666666666667C77.4375,125.33333333333333,77.4375,133.66666666666666,77.4375,141.11666
666666667C77.4375,148.56666666666666,77.4375,155.13333333333333,77.4375,158.41666666666666L77.4375,161.7"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-C" id="L-A-C-0"
d="M322.60546875,31.197615008285332L311.814453125,35.748012506904445C301.0234375,40.29841000552356,279.44140625,
49.39920500276178,268.650390625,57.23293583471422C257.859375,65.06666666666666,257.859375,71.63333333333334,257.8
59375,74.91666666666667L257.859375,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-G" id="L-C-G-0"
d="M257.859375,117L257.859375,121.16666666666667C257.859375,125.33333333333333,257.859375,133.66666666666666,257.
```

859375,141.11666666666667C257.859375,148.56666666666666,257.859375,155.13333333333333,257.859375,158.41666666666666L257.859375,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"

d="M391.12890625,31.197615008285332L401.919921875,35.748012506904445C412.7109375,40.29841000552356,434.29296875,49.39920500276178,445.083984375,57.23293583471422C455.875,65.06666666666666,455.875,71.63333333333334,455.875,74.91666666666667L455.875,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-H" id="L-D-H-0"

d="M455.875,117L455.875,121.16666666666667C455.875,125.33333333333333,455.875,133.66666666666666,455.875,141.11666666666667C455.875,148.56666666666666,455.875,155.13333333333333,455.875,158.41666666666666L455.875,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0"

d="M391.12890625,21.753200530119823L433.0690104166667,27.877667108433187C475.0091145833333,34.002133686746554,58.8893229166666,46.25106684337327,600.8294270833334,55.65886675501997C642.76953125,65.06666666666666,642.76953125,71.63333333333334,642.76953125,74.91666666666667L642.76953125,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-I" id="L-E-I-0"

d="M642.76953125,117L642.76953125,121.16666666666667C642.76953125,125.33333333333333,642.76953125,133.66666666666666,642.76953125,141.11666666666667C642.76953125,148.56666666666666,642.76953125,155.13333333333333,642.76953125,158.41666666666666L642.76953125,161.7"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="nodes"><g transform="translate(356.8671875, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="68.5234375" y="-16.75" x="-34.26171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-26.76171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="53.5234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">utils.py</div></foreignObject></g></g><g transform="translate(77.4375, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="150.171875" y="-16.75" x="-75.0859375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-67.5859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="135.171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">load_grammar_file</div></foreignObject></g></g><g transform="translate(257.859375, 100.25)" id="flowchart-C-2" class="node default default flowchart-label"><rect height="33.5" width="110.671875" y="-16.75" x="-55.3359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-47.8359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="95.671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">count_tokens</div></foreignObject></g></g><g transform="translate(455.875, 100.25)" id="flowchart-D-3" class="node default default flowchart-label"><rect height="33.5" width="185.359375" y="-16.75" x="-92.6796875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-85.1796875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="170.359375"><div style="display: inline-block; white-space: nowrap;"

```

xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">get_available_wrappers</span></div></foreignObject></g></g><g
transform="translate(642.76953125, 100.25)" id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5"
width="68.3828125" y="-16.75" x="-34.19140625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-26.69140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="53.3828125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">DotDict</span></div></foreignObject></g></g><g transform="translate(77.4375, 183.75)" id="flowchart-F-5"
class="node default default flowchart-label"><rect height="33.5" width="154.875" y="-16.75" x="-77.4375" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-69.9375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="139.875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Input Grammar File</span></div></foreignObject></g></g><g transform="translate(257.859375, 183.75)"
id="flowchart-G-6" class="node default default flowchart-label"><rect height="33.5" width="103.2265625" y="-16.75"
x="-51.61328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-44.11328125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="88.2265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Token Count</span></div></foreignObject></g></g><g
transform="translate(455.875, 183.75)" id="flowchart-H-7" class="node default default flowchart-label"><rect height="33.5"
width="100.4140625" y="-16.75" x="-50.20703125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-42.70703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="85.4140625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">AI
Wrappers</span></div></foreignObject></g></g><g transform="translate(642.76953125, 183.75)" id="flowchart-I-8" class="node
default default flowchart-label"><rect height="33.5" width="173.375" y="-16.75" x="-86.6875" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-79.1875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="158.375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Dictionary-like Object</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-67.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-67.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-7.5 -8 1247.58203125 1310.8046875"
style="max-width: 1247.58px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px:pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

```

```

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M500.419921875,1233.4843651019623L579.2405598958334,1226.9960855016352C658.0611979166666,1220.5078059013083,
815.7024739583334,1207.531246700654,900.4776692708333,1201.042967100327C985.2528645833332,1194.5546875,997.16197
91666667,1194.5546875,1003.1165364583334,1194.5546875L1009.07109375,1194.5546875"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-C" id="L-A-C-0"

d="M500.419921875,1239.1250098980377L579.2405598958334,1245.6132894983648C658.0611979166666,1252.1015690986917,
815.7024739583334,1265.078128299346,904.1508463541667,1271.566407899673C992.59921875,1278.0546875,1011.854687500
0001,1278.0546875,1021.482421875,1278.0546875L1031.11015625,1278.0546875"/></g><g class="edgeLabels"><g
transform="translate(973.34375, 1194.5546875)" class="edgeLabel"><g transform="translate(-16.02734375, -9.25)"
class="label"><foreignObject height="18.5" width="32.0546875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Uses</span></div></foreignObject></g></g><g
transform="translate(973.34375, 1278.0546875)" class="edgeLabel"><g transform="translate(-16.02734375, -9.25)"
class="label"><foreignObject height="18.5" width="32.0546875"><div style="display: inline-block; white-space: nowrap;"

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xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Uses</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(-7.5, -8)" class="root"><g class="clusters"><g id="print_server_response" class="cluster
default flowchart-label"><rect height="689.7890625" width="932.31640625" y="8" x="8" ry="0" rx="0" style=""><g
transform="translate(394.841796875, 8)" class="cluster-label"><foreignObject height="18.5" width="158.6328125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">print_server_response</span></div></foreignObject></g></g></g><g class="edgePaths"><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H
LE-I" id="L-H-I-0"
d="M465.56640625,66.5L465.56640625,70.66666666666667C465.56640625,74.83333333333333,465.56640625,83.16666666666666
67,465.63242265047455,90.70016975753656C465.69843905094916,98.23367284840646,465.83047185189827,104.96734569681
291,465.8964882523728,108.33418212101613L465.96250465284743,111.70101854521936"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I
LE-J" id="L-I-J-0"
d="M396.1193359830077,241.3185547330077L351.35400394417303,258.6013997775064C306.58867190533846,275.8842448220
051,217.05800782766923,310.4499349110026,172.2926757888346,345.72639974716793C127.52734375,381.00286458333335,12
7.52734375,416.9901041666667,127.52734375,434.9837239583333L127.52734375,452.97734375"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I
LE-K" id="L-I-K-0"
d="M419.16213862292824,264.36135737292824L406.44826656077356,277.80373531077356C393.7343944986189,291.24611324
86188,368.3066503743094,318.1308691243094,355.5927783121547,349.5668668538214C342.87890625,381.00286458333335,34
2.87890625,416.9901041666667,342.87890625,434.9837239583333L342.87890625,452.97734375"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I
LE-L" id="L-I-L-0"
d="M510.3745990828456,266.9574321671544L521.2734289232046,279.9671309726287C532.1722587635637,292.976829778102
97,553.9699184442819,318.99622738905146,564.9393731012852,336.9143509513051C575.9088277582886,354.8324745135587
4,576.0500773915772,364.6493240271175,576.1207022082216,369.5577487838969L576.1913270248658,374.46617354067627"/>
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><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid  
flowchart-link LS-L LE-M" id="L-L-M-0"  
  
d="M507.00643337407917,502.02791774907917L461.8341371867327,519.1964418742326C416.66184099938613,536.364965999  
3861,326.31724862469304,570.7020142496931,281.14495243734655,592.6955383748465C235.97265625,614.6890625,235.9726  
5625,624.3390625000001,235.97265625,629.1640625L235.97265625,633.9890625"/><path  
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-L  
LE-N" id="L-L-N-0"  
  
d="M537.6232717233464,532.6447560983464L529.3201743527887,544.7104738319554C521.017076982231,556.7761915655643,  
504.41088224111553,580.9076270327822,496.10778487055774,597.7983447663911C487.8046875,614.6890625,487.8046875,62  
4.3390625000001,487.8046875,629.1640625L487.8046875,633.9890625"/><path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-L LE-O" id="L-L-O-0"  
  
d="M616.4875166877325,531.0691239372675L625.3919409897771,543.3974470310562C634.2963652918216,555.725770124845,  
652.1052138959109,580.3824163124225,661.0096381979555,597.5357394062112C669.9140625,614.6890625,669.9140625,624.3  
390625000001,669.9140625,629.1640625L669.9140625,633.9890625"/><path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-L LE-P" id="L-L-P-0"  
  
d="M638.75004359085,508.80659703414995L668.936234242375,524.8453412784582C699.1224248939001,540.8840855227667,7  
59.49480619695,572.9615740113833,789.6809968484749,593.8253182556917C819.8671875,614.6890625,819.8671875,624.3390  
625000001,819.8671875,629.1640625L819.8671875,633.9890625"/><path marker-end="url(#my-svg_flowchart-pointEnd)"  
style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-I LE-Q" id="L-I-Q-0"  
  
d="M538.3116594966729,239.02037175332714L589.7519037472274,256.6862472944393C641.192147997782,274.352122835551  
4,744.0726364988909,309.6838739177757,795.5128807494453,345.34336925055453C846.953125,381.00286458333335,846.953  
125,416.9901041666667,846.953125,434.9837239583333L846.953125,452.97734375"/></g><g class="edgeLabels"><g  
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;  
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g  
transform="translate(127.52734375, 345.015625)" class="edgeLabel"><g transform="translate(-76.84375, -9.25)"  
class="label"><foreignObject height="18.5" width="153.6875"><div style="display: inline-block; white-space: nowrap;"
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xmlns="http://www.w3.org/1999/xhtml">agent_response_start</div></foreignObject></g></g><g
transform="translate(342.87890625, 345.015625)" class="edgeLabel"><g transform="translate(-73.140625, -9.25)"
class="label"><foreignObject height="18.5" width="146.28125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">agent_response_end</div></foreignObject></g></g><g
transform="translate(575.767578125, 345.015625)" class="edgeLabel"><g transform="translate(-55.75390625, -9.25)"
class="label"><foreignObject height="18.5" width="111.5078125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">agent_response</div></foreignObject></g></g><g
transform="translate(235.97265625, 605.0390625)" class="edgeLabel"><g transform="translate(-71.42578125, -9.25)"
class="label"><foreignObject height="18.5" width="142.8515625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">internal_monologue</div></foreignObject></g></g><g
transform="translate(487.8046875, 605.0390625)" class="edgeLabel"><g transform="translate(-65.375, -9.25)"
class="label"><foreignObject height="18.5" width="130.75"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">assistant_message</div></foreignObject></g></g><g
transform="translate(669.9140625, 605.0390625)" class="edgeLabel"><g transform="translate(-64.03515625, -9.25)"
class="label"><foreignObject height="18.5" width="128.0703125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">function_message</div></foreignObject></g></g><g
transform="translate(819.8671875, 605.0390625)" class="edgeLabel"><g transform="translate(-42.3984375, -9.25)"
class="label"><foreignObject height="18.5" width="84.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Other Types</div></foreignObject></g></g><g
transform="translate(846.953125, 345.015625)" class="edgeLabel"><g transform="translate(-42.3984375, -9.25)"
class="label"><foreignObject height="18.5" width="84.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Other Types</div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(465.56640625, 213.6328125)" id="flowchart-l-11" class="node default default
flowchart-label"><polygon style="" transform="translate(-97.1328125,97.1328125)" class="label-container" points="97.1328125,0
194.265625,-97.1328125 97.1328125,-194.265625 0,-97.1328125"/><g transform="translate(-72.8828125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="145.765625"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">response type check</div></foreignObject></g></g><g transform="translate(465.56640625, 49.75)" id="flowchart-H-10" class="node default default flowchart-label"><rect height="33.5" width="77.8671875" y="-16.75" x="-38.93359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-31.43359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="62.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">response</div></foreignObject></g></g><g transform="translate(127.52734375, 475.02734375)" id="flowchart-J-13" class="node default default flowchart-label"><rect height="33.5" width="169.0546875" y="-16.75" x="-84.52734375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-77.02734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="154.0546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Print agent.step start</div></foreignObject></g></g><g transform="translate(342.87890625, 475.02734375)" id="flowchart-K-15" class="node default default flowchart-label"><rect height="33.5" width="161.6484375" y="-16.75" x="-80.82421875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-73.32421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="146.6484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Print agent.step end</div></foreignObject></g></g><g transform="translate(575.767578125, 475.02734375)" id="flowchart-L-17" class="node default default flowchart-label"><polygon style="" transform="translate(-95.76171875,95.76171875)" class="label-container" points="95.76171875,0 191.5234375,-95.76171875 95.76171875,-191.5234375 0,-95.76171875"/><g transform="translate(-71.51171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="143.0234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">message type check</div></foreignObject></g></g><g transform="translate(235.97265625, 656.0390625)" id="flowchart-M-19" class="node default default flowchart-label"><rect height="33.5" width="222.625" y="-16.75" x="-111.3125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-103.8125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="207.625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Print inner thoughts message</div></foreignObject></g></g><g transform="translate(487.8046875, 656.0390625)" id="flowchart-N-21" class="node default default flowchart-label"><rect height="33.5" width="181.0390625" y="-16.75" x="-90.51953125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-83.01953125, -9.25)" style=""

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class="label"><rect/><foreignObject height="18.5" width="166.0390625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Print assistant message</span></div></foreignObject></g></g><g
transform="translate(669.9140625, 656.0390625)" id="flowchart-O-23" class="node default default flowchart-label"><rect
height="33.5" width="83.1796875" y="-16.75" x="-41.58984375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-34.08984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="68.1796875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">No
action</span></div></foreignObject></g></g><g transform="translate(819.8671875, 656.0390625)" id="flowchart-P-25" class="node
default default flowchart-label"><rect height="33.5" width="116.7265625" y="-16.75" x="-58.36328125" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-50.86328125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="101.7265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Print response</span></div></foreignObject></g></g><g
transform="translate(846.953125, 475.02734375)" id="flowchart-Q-27" class="node default default flowchart-label"><rect
height="33.5" width="116.7265625" y="-16.75" x="-58.36328125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-50.86328125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="101.7265625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Print
response</span></div></foreignObject></g></g></g></g><g transform="translate(82.224609375, 731.7890625)" class="root"><g
class="clusters"><g id="condition_to_stop_receiving" class="cluster default flowchart-label"><rect height="429.765625"
width="752.8671875" y="8" x="8" ry="0" rx="0" style=""><g transform="translate(283.078125, 8)"
class="cluster-label"><foreignObject height="18.5" width="202.7109375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">condition_to_stop_receiving</span></div></foreignObject></g></g></g><g class="edgePaths"><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D
LE-E" id="L-D-E-0"
d="M479.87890625,66.5L479.87890625,70.66666666666667C479.87890625,74.83333333333333,479.87890625,83.16666666666666
67,479.94492265047455,90.70016975753656C480.01093905094916,98.23367284840646,480.14297185189827,104.96734569681
291,480.2089882523728,108.33418212101613L480.27500465284743,111.70101854521936"/><path
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marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-F" id="L-E-F-0"

d="M425.39014895743304,256.27686770743304L405.90064496452754,271.06666058952754C386.411140971622,285.85645347162205,347.432132985811,315.436039235811,327.9426289929055,335.0508321179055C308.453125,354.66562500000003,308.453125,364.315625,308.453125,369.140625L308.453125,373.965625"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-G" id="L-E-G-0"

d="M535.367663542567,256.27686770743304L554.6905008688059,271.06666058952754C574.0133381950446,285.85645347162205,612.6590128475224,315.436039235811,631.9818501737612,335.0508321179055C651.3046875,354.66562500000003,651.3046875,364.315625,651.3046875,369.140625L651.3046875,373.965625"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g transform="translate(308.453125, 345.015625)" class="edgeLabel"><g transform="translate(-280.453125, -9.25)" class="label"><foreignObject height="18.5" width="560.90625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">agent_response_end, agent_response_error, command_response, server_error</div></foreignObject></g></g><g transform="translate(651.3046875, 345.015625)" class="edgeLabel"><g transform="translate(-42.3984375, -9.25)" class="label"><foreignObject height="18.5" width="84.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Other Types</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(479.87890625, 213.6328125)" id="flowchart-E-5" class="node default default flowchart-label"><polygon style="" transform="translate(-97.1328125,97.1328125)" class="label-container" points="97.1328125,0 194.265625,-97.1328125 97.1328125,-194.265625 0,-97.1328125"/><g transform="translate(-72.8828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="145.765625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">response type check</div></foreignObject></g></g><g transform="translate(479.87890625, 49.75)" id="flowchart-D-4" class="node default default flowchart-label"><rect height="33.5" width="77.8671875" y="-16.75" x="-38.93359375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-31.43359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="62.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-68.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-7.5 -8 5667.0390625 203" style="max-width:
5667.04px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8,fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
```

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class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"/><g class="edgeLabels"/><g class="nodes"><g transform="translate(-7.5, -8)" class="root"><g
class="clusters"><g id="utils.py" class="cluster default flowchart-label"><rect height="187" width="5651.0390625" y="8" x="8" ry="0"
rx="0" style=""><g transform="translate(2806.7578125, 8)" class="cluster-label"><foreignObject height="18.5"
width="53.5234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">utils.py</span></div></foreignObject></g></g></g><g class="edgePaths"><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-count_tokens LE-cosine_similarity" id="L-count_tokens-cosine_similarity-0"

d="M155.421875,91.5L159.58854166666666,91.5C163.75520833333334,91.5,172.08854166666666,91.5,179.53854166666667,91.
5C186.98854166666667,91.5,193.55520833333333,91.5,196.83854166666666,91.5L200.121875,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-cosine_similarity LE-united_diff" id="L-cosine_similarity-united_diff-0"

d="M352.6015625,91.5L356.7682291666667,91.5C360.9348958333333,91.5,369.2682291666667,91.5,376.7182291666666,91.5C3
84.16822916666666,91.5,390.73489583333334,91.5,394.0182291666667,91.5L397.3015625,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-united_diff LE-get_local_time_military" id="L-united_diff-get_local_time_military-0"

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d="M509.078125,91.5L513.2447916666666,91.5C517.4114583333334,91.5,525.7447916666666,91.5,533.1947916666667,91.5C540.6447916666667,91.5,547.2114583333333,91.5,550.4947916666666,91.5L553.778125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-get_local_time_military LE-get_local_time_timezone" id="L-get_local_time_military-get_local_time_timezone-0"

d="M757.3515625,91.5L761.5182291666666,91.5C765.6848958333334,91.5,774.0182291666666,91.5,781.4682291666667,91.5C788.9182291666666,91.5,795.4848958333333,91.5,798.7682291666666,91.5L802.0515625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-get_local_time_timezone LE-get_local_time" id="L-get_local_time_timezone-get_local_time-0"

d="M1016.203125,91.5L1020.3697916666666,91.5C1024.5364583333333,91.5,1032.8697916666667,91.5,1040.3197916666666,91.5C1047.7697916666666,91.5,1054.3364583333334,91.5,1057.6197916666667,91.5L1060.903125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-get_local_time LE-parse_json" id="L-get_local_time-parse_json-0"

d="M1200.1015625,91.5L1204.2682291666667,91.5C1208.4348958333333,91.5,1216.7682291666667,91.5,1224.2182291666666,91.5C1231.6682291666666,91.5,1238.2348958333334,91.5,1241.5182291666667,91.5L1244.8015625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-parse_json LE-prepare_archival_index" id="L-parse_json-prepare_archival_index-0"

d="M1353.65625,91.5L1357.8229166666667,91.5C1361.9895833333333,91.5,1370.3229166666667,91.5,1377.7729166666668,91.5C1385.2229166666666,91.5,1391.7895833333332,91.5,1395.0729166666667,91.5L1398.35625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-prepare_archival_index LE-read_in_chunks" id="L-prepare_archival_index-read_in_chunks-0"

d="M1599.0859375,91.5L1603.2526041666667,91.5C1607.4192708333333,91.5,1615.7526041666667,91.5,1623.2026041666668,91.5C1630.6526041666666,91.5,1637.2192708333332,91.5,1640.5026041666667,91.5L1643.7859375,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-read_in_chunks LE-read_pdf_in_chunks" id="L-read_in_chunks-read_pdf_in_chunks-0"

d="M1786.8828125,91.5L1791.0494791666667,91.5C1795.2161458333333,91.5,1803.5494791666667,91.5,1810.9994791666668,91.5C1818.4494791666666,91.5,1825.0161458333332,91.5,1828.2994791666667,91.5L1831.5828125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-read_pdf_in_chunks LE-read_in_rows_csv" id="L-read_pdf_in_chunks-read_in_rows_csv-0"

d="M2006.8125,91.5L2010.9791666666667,91.5C2015.1458333333333,91.5,2023.4791666666667,91.5,2030.9291666666668,91.5

C2038.3791666666666,91.5,2044.9458333333332,91.5,2048.2291666666665,91.5L2051.5125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-read_in_rows_csv LE-prepare_archival_index_from_files" id="L-read_in_rows_csv-prepare_archival_index_from_files-0"

d="M2209.7265625,91.5L2213.8932291666665,91.5C2218.0598958333335,91.5,2226.3932291666665,91.5,2233.843229166667,91

.5C2241.2932291666666,91.5,2247.859895833333,91.5,2251.1432291666665,91.5L2254.4265625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-prepare_archival_index_from_files LE-total_bytes" id="L-prepare_archival_index_from_files-total_bytes-0"

d="M2536.3359375,91.5L2540.5026041666665,91.5C2544.6692708333335,91.5,2553.0026041666665,91.5,2560.452604166667,91

.5C2567.9026041666666,91.5,2574.469270833333,91.5,2577.7526041666665,91.5L2581.0359375,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-total_bytes LE-chunk_file" id="L-total_bytes-chunk_file-0"

d="M2694.2265625,91.5L2698.3932291666665,91.5C2702.5598958333335,91.5,2710.8932291666665,91.5,2718.343229166667,91

.5C2725.7932291666666,91.5,2732.359895833333,91.5,2735.6432291666665,91.5L2738.9265625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-chunk_file LE-chunk_files" id="L-chunk_file-chunk_files-0"

d="M2845.5078125,91.5L2849.6744791666665,91.5C2853.8411458333335,91.5,2862.1744791666665,91.5,2869.624479166667,91

.5C2877.074479166667,91.5,2883.641145833333,91.5,2886.9244791666665,91.5L2890.2078125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-chunk_files LE-chunk_files_for_jsonl" id="L-chunk_files-chunk_files_for_jsonl-0"

d="M3003.265625,91.5L3007.4322916666665,91.5C3011.5989583333335,91.5,3019.9322916666665,91.5,3027.382291666667,91.

5C3034.832291666667,91.5,3041.398958333333,91.5,3044.6822916666665,91.5L3047.965625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-chunk_files_for_jsonl LE-process_chunk" id="L-chunk_files_for_jsonl-process_chunk-0"

d="M3232.9140625,91.5L3237.0807291666665,91.5C3241.2473958333335,91.5,3249.5807291666665,91.5,3257.030729166667,91.5C3264.480729166667,91.5,3271.047395833333,91.5,3274.3307291666665,91.5L3277.6140625,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-process_chunk LE-process_concurrently" id="L-process_chunk-process_concurrently-0"

d="M3413.59375,91.5L3417.7604166666665,91.5C3421.9270833333335,91.5,3430.2604166666665,91.5,3437.710416666667,91.5C3445.160416666667,91.5,3451.727083333333,91.5,3455.0104166666665,91.5L3458.29375,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-process_concurrently LE-prepare_archival_index_from_files_compute_embeddings"
id="L-process_concurrently-prepare_archival_index_from_files_compute_embeddings-0"

d="M3642.828125,91.5L3646.9947916666665,91.5C3651.1614583333335,91.5,3659.4947916666665,91.5,3666.944791666667,91.5C3674.394791666667,91.5,3680.961458333333,91.5,3684.2447916666665,91.5L3687.528125,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-prepare_archival_index_from_files_compute_embeddings LE-read_database_as_list"
id="L-prepare_archival_index_from_files_compute_embeddings-read_database_as_list-0"

d="M4134.0234375,91.5L4138.190104166667,91.5C4142.356770833333,91.5,4150.690104166667,91.5,4158.140104166667,91.5C4165.590104166667,91.5,4172.156770833333,91.5,4175.440104166667,91.5L4178.7234375,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-read_database_as_list LE-estimate_openai_cost" id="L-read_database_as_list-estimate_openai_cost-0"

d="M4369.7890625,91.5L4373.955729166667,91.5C4378.122395833333,91.5,4386.455729166667,91.5,4393.905729166667,91.5C4401.355729166667,91.5,4407.922395833333,91.5,4411.205729166667,91.5L4414.4890625,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-estimate_openai_cost LE-list_agent_config_files" id="L-estimate_openai_cost-list_agent_config_files-0"

d="M4603.453125,91.5L4607.619791666667,91.5C4611.786458333333,91.5,4620.119791666667,91.5,4627.569791666667,91.5C4635.019791666667,91.5,4641.586458333333,91.5,4644.869791666667,91.5L4648.153125,91.5"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-list_agent_config_files LE-list_human_files" id="L-list_agent_config_files-list_human_files-0"

d="M4841.8828125,91.5L4846.049479166667,91.5C4850.216145833333,91.5,4858.549479166667,91.5,4865.999479166667,91.5C4873.449479166667,91.5,4880.016145833333,91.5,4883.299479166667,91.5L4886.5828125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-list_human_files LE-list_persona_files" id="L-list_human_files-list_persona_files-0"

d="M5035.828125,91.5L5039.994791666667,91.5C5044.161458333333,91.5,5052.494791666667,91.5,5059.944791666667,91.5C5067.394791666667,91.5,5073.961458333333,91.5,5077.244791666667,91.5L5080.528125,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-list_persona_files LE-get_human_text" id="L-list_persona_files-get_human_text-0"

d="M5237.9296875,91.5L5242.096354166667,91.5C5246.263020833333,91.5,5254.596354166667,91.5,5262.046354166667,91.5C5269.496354166667,91.5,5276.063020833333,91.5,5279.346354166667,91.5L5282.6296875,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-get_human_text LE-get_persona_text" id="L-get_human_text-get_persona_text-0"

d="M5394.029332759186,74.75L5404.508818965988,69.60416666666667C5414.988305172791,64.45833333333333,5435.947277586395,54.16666666666666,5449.72079657916,49.538243345398094C5463.494315571926,44.90982002412952,5470.08238114385,45.94464004825904,5473.376413929812,46.462050060323804L5476.670446715775,46.97946007238856"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-get_persona_text LE-get_human_text" id="L-get_persona_text-get_human_text-0"

d="M5504.6541584645665,76.5L5496.696173720472,79C5488.738188976378,81.5,5472.822219488189,86.5,5461.580901410762,89C5450.339583333333,91.5,5443.772916666667,91.5,5440.489583333333,91.5L5437.20625,91.5"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-get_human_text LE-get_schema_diff" id="L-get_human_text-get_schema_diff-0"

d="M5391.310310990338,108.25L5402.242967491949,114.08333333333333C5413.1756239935585,119.91666666666667,5435.040936996779,131.58333333333334,5449.81031224839,137.41666666666666C5464.579687500001,143.25,5472.253125,143.25,5476.08984375,143.25L5479.9265625,143.25"/></g><g class="edgeLabels"><g class="edgeLabel"><g transform="translate(0, 0)"

class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g

[illegible]

[illegible]

transform="translate(279.01171875, 91.5)" id="flowchart-cosine_similarity-1" class="node default default flowchart-label"><rect height="33.5" width="147.1796875" y="-16.75" x="-73.58984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-66.08984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="132.1796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">cosine_similarity()/></div></foreignObject></g></g><g transform="translate(94.2109375, 91.5)" id="flowchart-count_tokens-0" class="node default default flowchart-label"><rect height="33.5" width="122.421875" y="-16.75" x="-61.2109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-53.7109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="107.421875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">count_tokens()/></div></foreignObject></g></g><g transform="translate(455.83984375, 91.5)" id="flowchart-united_diff-3" class="node default default flowchart-label"><rect height="33.5" width="106.4765625" y="-16.75" x="-53.23828125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-45.73828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="91.4765625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">united_diff()/></div></foreignObject></g></g><g transform="translate(658.21484375, 91.5)" id="flowchart-get_local_time_military-5" class="node default default flowchart-label"><rect height="33.5" width="198.2734375" y="-16.75" x="-99.13671875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-91.63671875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="183.2734375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">get_local_time_military()/></div></foreignObject></g></g><g transform="translate(911.77734375, 91.5)" id="flowchart-get_local_time_timezone-7" class="node default default flowchart-label"><rect height="33.5" width="208.8515625" y="-16.75" x="-104.42578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-96.92578125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="193.8515625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">get_local_time_timezone()/></div></foreignObject></g></g><g transform="translate(1133.15234375, 91.5)" id="flowchart-get_local_time-9" class="node default default flowchart-label"><rect height="33.5" width="133.8984375" y="-16.75" x="-66.94921875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-59.44921875, -9.25)" style=""

class="label"><rect/><foreignObject height="18.5" width="118.8984375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">get_local_time()/></div></foreignObject></g></g><g
transform="translate(1301.87890625, 91.5)" id="flowchart-parse_json-11" class="node default default flowchart-label"><rect
height="33.5" width="103.5546875" y="-16.75" x="-51.77734375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-44.27734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="88.5546875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">parse_json()/></div></foreignObject></g></g><g transform="translate(1501.37109375, 91.5)"
id="flowchart-prepare_archival_index-13" class="node default default flowchart-label"><rect height="33.5" width="195.4296875"
y="-16.75" x="-97.71484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-90.21484375, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="180.4296875"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">prepare_archival_index()/></div></foreignObject></g></g><g transform="translate(1717.984375, 91.5)"
id="flowchart-read_in_chunks-15" class="node default default flowchart-label"><rect height="33.5" width="137.796875" y="-16.75"
x="-68.8984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-61.3984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="122.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">read_in_chunks()/></div></foreignObject></g></g><g
transform="translate(1921.84765625, 91.5)" id="flowchart-read_pdf_in_chunks-17" class="node default default flowchart-label"><rect
height="33.5" width="169.9296875" y="-16.75" x="-84.96484375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-77.46484375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="154.9296875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">read_pdf_in_chunks()/></div></foreignObject></g></g><g transform="translate(2133.26953125, 91.5)"
id="flowchart-read_in_rows_csv-19" class="node default default flowchart-label"><rect height="33.5" width="152.9140625" y="-16.75"
x="-76.45703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-68.95703125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="137.9140625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">read_in_rows_csv()/></div></foreignObject></g></g><g
transform="translate(2398.03125, 91.5)" id="flowchart-prepare_archival_index_from_files-21" class="node default default

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flowchart-label"><rect height="33.5" width="276.609375" y="-16.75" x="-138.3046875" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-130.8046875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="261.609375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">prepare_archival_index_from_files()/></span></div></foreignObject></g></g><g transform="translate(2640.28125,
91.5)" id="flowchart-total_bytes-23" class="node default default flowchart-label"><rect height="33.5" width="107.890625" y="-16.75"
x="-53.9453125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.4453125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="92.890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">total_bytes()/></span></div></foreignObject></g></g><g
transform="translate(2794.8671875, 91.5)" id="flowchart-chunk_file-25" class="node default default flowchart-label"><rect
height="33.5" width="101.28125" y="-16.75" x="-50.640625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-43.140625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="86.28125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">chunk_file()/></span></div></foreignObject></g></g><g transform="translate(2949.38671875, 91.5)"
id="flowchart-chunk_files-27" class="node default default flowchart-label"><rect height="33.5" width="107.7578125" y="-16.75"
x="-53.87890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-46.37890625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="92.7578125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">chunk_files()/></span></div></foreignObject></g></g><g
transform="translate(3143.08984375, 91.5)" id="flowchart-chunk_files_for_jsonl-29" class="node default default flowchart-label"><rect
height="33.5" width="179.6484375" y="-16.75" x="-89.82421875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-82.32421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="164.6484375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">chunk_files_for_jsonl()/></span></div></foreignObject></g></g><g transform="translate(3348.25390625, 91.5)"
id="flowchart-process_chunk-31" class="node default default flowchart-label"><rect height="33.5" width="130.6796875" y="-16.75"
x="-65.33984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-57.83984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="115.6796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">process_chunk()/></span></div></foreignObject></g></g><g
```


transform="translate(3553.2109375, 91.5)" id="flowchart-process_concurrently-33" class="node default default flowchart-label"><rect
height="33.5" width="179.234375" y="-16.75" x="-89.6171875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-82.1171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="164.234375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">process_concurrently()/</div></foreignObject></g></g><g transform="translate(3913.42578125, 91.5)"
id="flowchart-prepare_archival_index_from_files_compute_embeddings-35" class="node default default flowchart-label"><rect
height="33.5" width="441.1953125" y="-16.75" x="-220.59765625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-213.09765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="426.1953125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">prepare_archival_index_from_files_compute_embeddings()/</div></foreignObject></g></g><g
transform="translate(4276.90625, 91.5)" id="flowchart-read_database_as_list-37" class="node default default flowchart-label"><rect
height="33.5" width="185.765625" y="-16.75" x="-92.8828125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-85.3828125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="170.765625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">read_database_as_list()/</div></foreignObject></g></g><g transform="translate(4511.62109375, 91.5)"
id="flowchart-estimate_openai_cost-39" class="node default default flowchart-label"><rect height="33.5" width="183.6640625"
y="-16.75" x="-91.83203125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-84.33203125, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="168.6640625"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">estimate_openai_cost()/</div></foreignObject></g></g><g transform="translate(4747.66796875, 91.5)"
id="flowchart-list_agent_config_files-41" class="node default default flowchart-label"><rect height="33.5" width="188.4296875"
y="-16.75" x="-94.21484375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-86.71484375, -9.25)"
style="" class="label"><rect/><foreignObject height="18.5" width="173.4296875"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">list_agent_config_files()/</div></foreignObject></g></g><g transform="translate(4963.85546875, 91.5)"
id="flowchart-list_human_files-43" class="node default default flowchart-label"><rect height="33.5" width="143.9453125" y="-16.75"

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x="-71.97265625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-64.47265625, -9.25)" style=""  
class="label"><rect/><foreignObject height="18.5" width="128.9453125"><div style="display: inline-block; white-space: nowrap;"  
  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">list_human_files()/</span></div></foreignObject></g></g><g  
transform="translate(5161.87890625, 91.5)" id="flowchart-list_persona_files-45" class="node default default flowchart-label"><rect  
height="33.5" width="152.1015625" y="-16.75" x="-76.05078125" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-68.55078125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="137.1015625"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
  
class="nodeLabel">list_persona_files()/</span></div></foreignObject></g></g><g transform="translate(5359.91796875, 91.5)"  
id="flowchart-get_human_text-47" class="node default default flowchart-label"><rect height="33.5" width="143.9765625" y="-16.75"  
x="-71.98828125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-64.48828125, -9.25)" style=""  
class="label"><rect/><foreignObject height="18.5" width="128.9765625"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">get_human_text()/</span></div></foreignObject></g></g><g  
transform="translate(5557.97265625, 59.75)" id="flowchart-get_persona_text-49" class="node default default flowchart-label"><rect  
height="33.5" width="152.1328125" y="-16.75" x="-76.06640625" ry="0" rx="0" style="" class="basic label-container"/><g  
transform="translate(-68.56640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="137.1328125"><div  
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span  
  
class="nodeLabel">get_persona_text()/</span></div></foreignObject></g></g><g transform="translate(5557.97265625, 143.25)"  
id="flowchart-get_schema_diff-53" class="node default default flowchart-label"><rect height="33.5" width="145.4921875" y="-16.75"  
x="-72.74609375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-65.24609375, -9.25)" style=""  
class="label"><rect/><foreignObject height="18.5" width="130.4921875"><div style="display: inline-block; white-space: nowrap;"  
xmlns="http://www.w3.org/1999/xhtml"><span  
  
class="nodeLabel">get_schema_diff()/</span></div></foreignObject></q></q></q></q></q></q></q></svg>
```

High_Level_Doc-69.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-69.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 925.34375 286.05859375"
```

```

style="max-width: 925.344px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"

xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

```

```
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M43.17957275947535,153.05859375L51.570216882896126,137.298828125C59.9608610063169,121.5390625,76.74214925315

844,90.01953125,88.41612670991258,74.259765625C100.09010416666666,58.5,106.65677083333333,58.5,109.94010416666667,

58.5L113.2234375,58.5"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-C" id="L-A-C-0"

d="M68.5234375,169.80859375L72.69010416666667,169.80859375C76.85677083333333,169.80859375,85.19010416666667,169.

80859375,96.64596354166667,169.80859375C108.10182291666666,169.80859375,122.68020833333333,169.80859375,129.9694

0104166666,169.80859375L137.25859375,169.80859375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-D" id="L-A-D-0"

d="M46.14954855913174,186.55859375L54.04519671594312,197.68359375C61.9408448727545,208.80859375,77.732141186377

25,231.05859375,91.95799767652197,242.18359375C106.18385416666666,253.30859375,118.84427083333333,253.30859375,12

5.17447916666667,253.30859375L131.5046875,253.30859375"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-E" id="L-B-E-0"

d="M287.21875,58.5L291.3854166666667,58.5C295.5520833333333,58.5,303.8854166666667,58.5,311.3354166666667,58.5C318

.78541666666666,58.5,325.3520833333333,58.5,328.6354166666667,58.5L331.91875,58.5"/><path
```

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-F" id="L-C-F-0"

d="M263.18359375,169.80859375L271.3561197916667,169.80859375C279.5286458333333,169.80859375,295.8736979166667,169.80859375,310.15052083333336,169.80859375C324.42734375000003,169.80859375,336.6359375,169.80859375,342.740234375,169.80859375L348.84453125,169.80859375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-G" id="L-D-G-0"

d="M268.9375,253.30859375L276.1510416666667,253.30859375C283.3645833333333,253.30859375,297.7916666666667,253.30859375,310.5014322916667,253.30859375C323.21119791666666,253.30859375,334.2036458333333,253.30859375,339.6998697916667,253.30859375L345.19609375,253.30859375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-H" id="L-E-H-0"

d="M491.5546875,58.5L495.7213541666667,58.5C499.8880208333333,58.5,508.2213541666667,58.5,521.9357052710774,58.57627659518357C535.6500563754881,58.65255319036715,554.7454252509763,58.80510638073431,564.2931096887204,58.88138297591788L573.8407941264644,58.95765957110145"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H LE-I" id="L-H-I-0"

d="M656.610330353649,47.35251785364899L670.7032700863742,42.252098211374154C684.7962098190993,37.151678569099325,712.9820892845497,26.950839284549662,735.0510706839415,21.85041964227483C757.1200520833332,16.75,773.0721354166667,16.75,781.0481770833334,16.75L789.02421875,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-H LE-J" id="L-H-J-0"

d="M656.610330353649,70.64748214635101L670.7032700863742,75.58123512195918C684.7962098190993,80.51498809756734,712.9820892845497,90.38249404878367,732.2457321422748,95.31624702439183C751.509375,100.25,761.8507812500001,100.25,767.021484375,100.25L772.1921875,100.25"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-K" id="L-F-K-0"

d="M474.62890625,169.80859375L481.6165364583333,169.80859375C488.6041666666667,169.80859375,502.5794270833333,169.80859375,518.1055989583333,169.80859375C533.6317708333333,169.80859375,550.7088541666667,169.80859375,559.2473958333334,169.80859375L567.7859375,169.80859375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-G LE-L" id="L-G-L-0"

d="M478.27734375,253.30859375L484.6569010416667,253.30859375C491.0364583333333,253.30859375,503.7955729166667,25
3.30859375,513.4584635416667,253.30859375C523.1213541666667,253.30859375,529.6880208333333,253.30859375,532.97135
41666666,253.30859375L536.2546875,253.30859375"/></g><g class="edgeLabels"><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(741.16796875, 16.75)" class="edgeLabel"><g transform="translate(-11.32421875, -9.25)"
class="label"><foreignObject height="18.5" width="22.6484375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Yes</div></foreignObject></g></g><g
transform="translate(741.16796875, 100.25)" class="edgeLabel"><g transform="translate(-9.3984375, -9.25)"
class="label"><foreignObject height="18.5" width="18.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">No</div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

```
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel"></span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(34.26171875,
169.80859375)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="68.5234375" y="-16.75"
x="-34.26171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-26.76171875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="53.5234375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">utils.py</span></div></foreignObject></g></g><g
transform="translate(202.87109375, 58.5)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="168.6953125" y="-16.75" x="-84.34765625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-76.84765625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="153.6953125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">is_valid_yaml_format</span></div></foreignObject></g></g><g transform="translate(202.87109375,
169.80859375)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="120.625" y="-16.75"
x="-60.3125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-52.8125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="105.625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">load_yaml_file</span></div></foreignObject></g></g><g
transform="translate(202.87109375, 253.30859375)" id="flowchart-D-5" class="node default default flowchart-label"><rect
height="33.5" width="132.1328125" y="-16.75" x="-66.06640625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-58.56640625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="117.1328125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">load_all_presets</span></div></foreignObject></g></g><g transform="translate(414.38671875, 58.5)"
id="flowchart-E-7" class="node default default flowchart-label"><rect height="33.5" width="154.3359375" y="-16.75"
x="-77.16796875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-69.66796875, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="139.3359375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Check YAML Format</span></div></foreignObject></g></g><g
transform="translate(414.38671875, 169.80859375)" id="flowchart-F-9" class="node default default flowchart-label"><rect
height="33.5" width="120.484375" y="-16.75" x="-60.2421875" ry="0" rx="0" style="" class="basic label-container"/><g
```

transform="translate(-52.7421875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="105.484375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load YAML File</div></foreignObject></g></g><g transform="translate(414.38671875, 253.30859375)" id="flowchart-G-11" class="node default default flowchart-label"><rect height="33.5" width="127.78125" y="-16.75" x="-63.890625" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-56.390625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="112.78125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Load All Presets</div></foreignObject></g></g><g transform="translate(623.19921875, 58.5)" id="flowchart-H-13" class="node default default flowchart-label"><polygon style="" transform="translate(-44.55859375,44.55859375)" class="label-container" points="44.55859375,0 89.1171875,-44.55859375 44.55859375,-89.1171875 0,-44.55859375"/><g transform="translate(-20.30859375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="40.6171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Valid?</div></foreignObject></g></g><g transform="translate(843.41796875, 16.75)" id="flowchart-I-15" class="node default default flowchart-label"><rect height="33.5" width="98.1875" y="-16.75" x="-49.09375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-41.59375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="83.1875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Return True</div></foreignObject></g></g><g transform="translate(843.41796875, 100.25)" id="flowchart-J-17" class="node default default flowchart-label"><rect height="33.5" width="131.8515625" y="-16.75" x="-65.92578125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-58.42578125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="116.8515625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Raise ValueError</div></foreignObject></g></g><g transform="translate(623.19921875, 169.80859375)" id="flowchart-K-19" class="node default default flowchart-label"><rect height="33.5" width="100.2265625" y="-16.75" x="-50.11328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-42.61328125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="85.2265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Return Data</div></foreignObject></g></g><g transform="translate(623.19921875, 253.30859375)" id="flowchart-L-21" class="node default default flowchart-label"><rect height="33.5" width="163.2890625" y="-16.75" x="-81.64453125" ry="0" rx="0" style=""


```
class="basic label-container"/><g transform="translate(-74.14453125, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="148.2890625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Return All YAML
Data</span></div></foreignObject></g></g></g></g></svg>
```

High_Level_Doc-7.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-7.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 920.25 511.7109375" style="max-width:
920.25px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFE;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
```

```
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 10
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M58.057804415780396,336.9609375L69.920566179817,303.51302083333333C81.78332794385359,270.0651041666667,105.50
88514719268,203.16927083333334,120.65494656929673,169.72135416666666C135.80104166666666,136.2734375,142.3677083
3333333,136.2734375,145.65104166666666,136.2734375L148.934375,136.2734375"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"

d="M372.109375,136.2734375L376.2760416666667,136.2734375C380.4427083333333,136.2734375,388.7760416666667,136.273
4375,396.2260416666666,136.2734375C403.6760416666666,136.2734375,410.2427083333334,136.2734375,413.5260416666666
```

```

7,136.2734375L416.809375,136.2734375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-D" id="L-C-D-0"

d="M581.703125,136.2734375L585.8697916666666,136.2734375C590.03645833333334,136.2734375,598.3697916666666,136.273
475,605.8197916666667,136.2734375C613.2697916666667,136.2734375,619.8364583333333,136.2734375,623.1197916666666,
136.2734375L626.403125,136.2734375"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"
class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-E" id="L-A-E-0"

d="M83.05641841317365,336.9609375L90.75274451097805,332.7942708333333C98.44907060878243,328.6276041666667,113.8
4172280439122,320.2942708333333,134.80901244386226,316.1276041666667C155.77630208333332,311.9609375,182.3182291
6666667,311.9609375,195.58919270833334,311.9609375L208.86015625,311.9609375"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-F" id="L-A-F-0"

d="M83.05641841317365,370.4609375L90.75274451097805,374.6276041666667C98.44907060878243,378.7942708333333,113.8
4172280439122,387.1276041666667,138.19052286052894,391.2942708333333C162.53932291666666,395.4609375,195.8442708
333333,395.4609375,212.49674479166666,395.4609375L229.14921875,395.4609375"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A
LE-G" id="L-A-G-0"

d="M62.43026447105788,370.4609375L73.56428289254823,388.5442708333333C84.69830131403859,406.6276041666667,106.9
663815701928,442.7942708333333,129.938377411843,460.8776041666667C152.91041666666666,478.9609375,176.586458333
3333,478.9609375,188.42447916666666,478.9609375L200.2625,478.9609375"/></g><g class="edgeLabels"><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;
white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel"></span></div></foreignObject></g></g><g
class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block;

```

white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(52.1171875, 353.7109375)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="104.234375" y="-16.75" x="-52.1171875" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-44.6171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="89.234375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">airoboros.py</div></foreignObject></g></g><g transform="translate(263.171875, 136.2734375)" id="flowchart-B-1" class="node default default flowchart-label"><circle height="33.5" width="217.875" r="108.9375" ry="0" rx="0" style=""/><g transform="translate(-101.4375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="202.875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">LLMChatCompletionWrapper</div></foreignObject></g></g><g transform="translate(501.90625, 136.2734375)" id="flowchart-C-2" class="node default default flowchart-label"><circle height="33.5" width="159.59375" r="79.796875" ry="0" rx="0" style=""/><g transform="translate(-72.296875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="144.59375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Airoboros21Wrapper</div></foreignObject></g></g><g transform="translate(767.9765625, 136.2734375)" id="flowchart-D-3" class="node default default flowchart-label"><circle height="33.5" width="272.546875" r="136.2734375" ry="0" rx="0" style=""/><g transform="translate(-128.7734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="257.546875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Airoboros21InnerMonologueWrapper</div></foreignObject></g></g><g transform="translate(263.171875, 311.9609375)" id="flowchart-E-4" class="node default default flowchart-label"><rect height="33.5" width="98.0234375" y="-16.75" x="-49.01171875" ry="0" rx="0" style="" class="basic label-container"/><g

```

transform="translate(-41.51171875, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="83.0234375"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">json_parser</span></div></foreignObject></g></g><g transform="translate(263.171875, 395.4609375)"
id="flowchart-F-5" class="node default default flowchart-label"><rect height="33.5" width="57.4453125" y="-16.75" x="-28.72265625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-21.22265625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="42.4453125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">errors</span></div></foreignObject></g></g><g
transform="translate(263.171875, 478.9609375)" id="flowchart-G-6" class="node default default flowchart-label"><rect height="33.5"
width="115.21875" y="-16.75" x="-57.609375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-50.109375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="100.21875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">wrapper_base</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-70.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-70.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 416.46875 253.5" style="max-width:
416.469px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

```

```
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
```

edge-pattern-solid flowchart-link LS-UserInput LE-WebSocketClient" id="L-UserInput-WebSocketClient-0"

d="M176.18359375,33.5L176.18359375,39.208333333333336C176.18359375,44.916666666666664,176.18359375,56.333333333333336,176.18359375,66.866666666666666C176.18359375,77.39999999999999,176.18359375,87.05,176.18359375,91.875L176.18359375,96.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-WebSocketClient LE-Server" id="L-WebSocketClient-Server-0"

d="M134.2636910232843,135.5L119.9775550194036,141.20833333333334C105.69141901552287,146.91666666666666,77.11914700776144,158.33333333333334,69.28602320022829,169.1985466810822C61.45289939269512,180.06376002883107,74.35892378539025,190.3775200576621,80.81193598173782,195.5344000720777L87.26494817808538,200.6912800864932"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-Server LE-WebSocketClient" id="L-Server-WebSocketClient-0"

d="M133.32518573835785,204L140.4682537402982,198.29166666666666C147.61132174223857,192.58333333333334,161.89745774611927,181.16666666666666,169.04052574805965,170.63333333333333C176.18359375,160.1,176.18359375,150.45000000000002,176.18359375,145.625L176.18359375,140.8"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-WebSocketClient LE-ServerResponse" id="L-WebSocketClient-ServerResponse-0"

d="M228.40674785539215,135.5L246.20419092116012,141.20833333333334C264.0016339869281,146.91666666666666,299.59652011846407,158.33333333333334,317.393963184232,168.86666666666667C335.19140625,179.4,335.19140625,189.04999999999998,335.19140625,193.875L335.19140625,198.7"/></g><g class="edgeLabels"><g transform="translate(176.18359375, 67.75)" class="edgeLabel"><g transform="translate(-50.80859375, -9.25)" class="label"><foreignObject height="18.5" width="101.6171875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Enter Message</div></foreignObject></g></g><g transform="translate(48.546875, 169.75)" class="edgeLabel"><g transform="translate(-48.546875, -9.25)" class="label"><foreignObject height="18.5" width="97.09375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Send Message</div></foreignObject></g></g><g transform="translate(176.18359375, 169.75)" class="edgeLabel"><g transform="translate(-59.08984375, -9.25)" class="label"><foreignObject height="18.5" width="118.1796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Receive

Message</div></foreignObject></g></g><g transform="translate(335.19140625, 169.75)" class="edgeLabel"><g
transform="translate(-52.0859375, -9.25)" class="label"><foreignObject height="18.5" width="104.171875"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Print
Response</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(176.18359375, 16.75)"
id="flowchart-UserInput-0" class="node default default flowchart-label"><rect height="33.5" width="88.8125" y="-16.75" x="-44.40625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-36.90625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="73.8125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">User Input</div></foreignObject></g></g><g
transform="translate(176.18359375, 118.75)" id="flowchart-WebSocketClient-1" class="node default default flowchart-label"><rect
height="33.5" width="162.7578125" y="-16.75" x="-81.37890625" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-73.87890625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="147.7578125"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">websocket_client.py</div></foreignObject></g></g><g transform="translate(112.365234375, 220.75)"
id="flowchart-Server-2" class="node default default flowchart-label"><rect height="33.5" width="143.125" y="-16.75" x="-71.5625"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-64.0625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="128.125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">WebSocket Server</div></foreignObject></g></g><g
transform="translate(335.19140625, 220.75)" id="flowchart-ServerResponse-3" class="node default default flowchart-label"><rect
height="33.5" width="130.5546875" y="-16.75" x="-65.27734375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-57.77734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="115.5546875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Server
Response</div></foreignObject></g></g></g></g></g></g></svg>

High_Level_Doc-71.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-71.svg):

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 931.7421875 1074.21875"


```

style="max-width: 931.742px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink"

xmlns="http://www.w3.org/2000/svg" width="100%" id="my-svg"><style>#my-svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg .error-icon{fill:#552222;}#my-svg
.error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px:pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

```

```
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-UserMessage LE-AsyncWebSocketInterface" id="L-UserMessage-AsyncWebSocketInterface-0"

d="M109.8125,517.01171875L117.07877604166667,517.01171875C124.34505208333333,517.01171875,138.87760416666666,517

.01171875,152.52682291666667,517.01171875C166.17604166666666,517.01171875,178.94192708333333,517.01171875,185.324

86979166666,517.01171875L191.7078125,517.01171875"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-AsyncWebSocketInterface LE-RegisterClient"

id="L-AsyncWebSocketInterface-RegisterClient-0"

d="M302.093237091698,500.26171875L326.03537986808163,429.6959635416667C349.97752264446535,359.1302083333333,397

.8618081972327,217.99869791666666,431.9935593213226,147.50962837793037C466.1253104454126,77.02055883919407,486.5

0452714082513,77.17393017838815,496.6941354885314,77.25061584798519L506.88374383623767,77.32730151758223"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-AsyncWebSocketInterface LE-UnregisterClient" id="L-AsyncWebSocketInterface-UnregisterClient-0"

d="M307.3775376876488,500.26171875L330.43896369804065,465.041015625C353.5003897084325,429.8203125,399.623241729

21626,359.37890625,431.48496086283626,324.23393510831136C463.3466799964562,289.0889639666227,480.94726624291235,

289.2404279332455,489.7475593661405,289.31615991655684L498.5478524893686,289.3918918998682"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
```

LS-AsyncWebSocketInterface LE-InternalMonologue" id="L-AsyncWebSocketInterface-InternalMonologue-0"

d="M395.8125,517.01171875L404.134765625,517.01171875C412.45703125,517.01171875,429.1015625,517.01171875,444.9461371573015,517.0862951233355C460.79071181460296,517.160871496671,475.83532987920586,517.310024243342,483.35763891150737,517.3846006166775L490.8799479438088,517.459176990013"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-AsyncWebSocketInterface LE-AssistantMessage" id="L-AsyncWebSocketInterface-AssistantMessage-0"

d="M307.2733469127988,533.76171875L330.35213805233235,569.3470052083334C353.4309291918659,604.9322916666666,399.58851147093293,676.1028645833334,431.10301500939187,711.7635856642083C462.6175185478508,747.4243067450834,479.48894334570167,747.5751759901669,487.92465574462705,747.6506106127086L496.36036814355253,747.7260452352505"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-AsyncWebSocketInterface LE-FunctionMessage" id="L-AsyncWebSocketInterface-FunctionMessage-0"

d="M301.914587456698,533.76171875L325.8865051722483,606.7083333333334C349.85842288779867,679.6549479166666,397.8022583188993,825.5481770833334,430.3121012129455,898.5703119778301C462.8219441069917,971.5924468723271,479.8977944639835,971.7434874946542,488.43571964247934,971.8190078058177L496.9736448209752,971.8945281169812"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-RegisterClient LE-ClientsDatabase" id="L-RegisterClient-ClientsDatabase-0"

d="M665.91796875,77.3671875L676.82421875,77.28385416666667C687.73046875,77.20052083333333,709.54296875,77.03385416666667,739.0055912231882,146.662666372673C768.4682136963762,216.2914785786793,805.5809586427523,355.7157696573586,824.1373311159405,425.4279151966982L842.6937035891285,495.1400607360378"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-UnregisterClient LE-ClientsDatabase" id="L-UnregisterClient-ClientsDatabase-0"

d="M674.25390625,289.4375L683.7708333333334,289.3541666666667C693.2877604166666,289.2708333333333,712.3216145833334,289.1041666666667,739.5275519518282,323.4558096117891C766.733489320323,357.8074525569116,802.1115098906461,426.67740511382317,819.8005201758075,461.1123813922789L837.489530460969,495.54735767073475"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-InternalMonologue LE-ClientsDatabase" id="L-InternalMonologue-ClientsDatabase-0"

d="M681.921875,517.51171875L690.1608072916666,517.4283854166666C698.3997395833334,517.3450520833334,714.8776041
666666,517.1783854166666,730.5554687499999,517.0950520833334C746.2333333333332,517.01171875,761.1111979166667,51
7.01171875,768.5501302083334,517.01171875L775.9890625,517.01171875"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-AssistantMessage LE-ClientsDatabase" id="L-AssistantMessage-ClientsDatabase-0"
d="M676.44140625,747.7734375L685.59375,747.6901041666666C694.74609375,747.6067708333334,713.05078125,747.4401041
666666,739.9088018278641,712.5587669000121C766.7668224057282,677.6774296333575,802.1781760614564,608.0814217667
149,819.8838528893206,573.2834178333937L837.5895297171846,538.4854139000724"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-FunctionMessage LE-ClientsDatabase" id="L-FunctionMessage-ClientsDatabase-0"
d="M675.828125,971.94140625L685.0826822916666,971.8580729166666C694.3372395833334,971.7747395833334,712.8463541
666666,971.6080729166666,740.6873343428338,899.4334876296952C768.5283145190009,827.2589023427236,805.7011602880
017,683.076398435447,824.2875831725022,610.9851464818088L842.8740060570026,538.8938945281704"/></g><g
class="edgeLabels"><g transform="translate(153.41015625, 517.01171875)" class="edgeLabel"><g
transform="translate(-18.59765625, -9.25)" class="label"><foreignObject height="18.5" width="37.1953125"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Input</div></foreignObject></g></g><g transform="translate(445.74609375, 76.8671875)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</div></foreignObject></g></g><g transform="translate(445.74609375, 288.9375)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</div></foreignObject></g></g><g transform="translate(445.74609375, 517.01171875)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</div></foreignObject></g></g><g transform="translate(445.74609375, 747.2734375)"

```
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(445.74609375, 971.44140625)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(731.35546875, 76.8671875)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(731.35546875, 288.9375)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(731.35546875, 517.01171875)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(731.35546875, 747.2734375)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g><g transform="translate(731.35546875, 971.44140625)"
class="edgeLabel"><g transform="translate(-24.93359375, -9.25)" class="label"><foreignObject height="18.5"
width="49.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="edgeLabel">Output</span></div></foreignObject></g></g></g><g class="nodes"><g transform="translate(54.90625,
517.01171875)" id="flowchart-UserMessage-0" class="node default default flowchart-label"><rect height="33.5" width="109.8125"
y="-16.75" x="-54.90625" ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-47.40625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="94.8125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">User Message</span></div></foreignObject></g></g><g
transform="translate(296.41015625, 517.01171875)" id="flowchart-AsyncWebSocketInterface-1" class="node default default
```

flowchart-label"><rect height="33.5" width="198.8046875" y="-16.75" x="-99.40234375" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-91.90234375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="183.8046875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">AsyncWebsocketInterface</div></foreignObject></g></g><g transform="translate(588.55078125,
76.8671875)" id="flowchart-RegisterClient-3" class="node default default flowchart-label"><polygon style=""
transform="translate(-76.8671875,76.8671875)" class="label-container" points="76.8671875,0 153.734375,-76.8671875
76.8671875,-153.734375 0,-76.8671875"/><g transform="translate(-52.6171875, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="105.234375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Register Client</div></foreignObject></g></g><g
transform="translate(588.55078125, 288.9375)" id="flowchart-UnregisterClient-5" class="node default default
flowchart-label"><polygon style="" transform="translate(-85.203125,85.203125)" class="label-container" points="85.203125,0
170.40625,-85.203125 85.203125,-170.40625 0,-85.203125"/><g transform="translate(-60.953125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="121.90625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Unregister Client</div></foreignObject></g></g><g
transform="translate(588.55078125, 517.01171875)" id="flowchart-InternalMonologue-7" class="node default default
flowchart-label"><polygon style="" transform="translate(-92.87109375,92.87109375)" class="label-container" points="92.87109375,0
185.7421875,-92.87109375 92.87109375,-185.7421875 0,-92.87109375"/><g transform="translate(-68.62109375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="137.2421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Internal Monologue</div></foreignObject></g></g><g
transform="translate(588.55078125, 747.2734375)" id="flowchart-AssistantMessage-9" class="node default default
flowchart-label"><polygon style="" transform="translate(-87.390625,87.390625)" class="label-container" points="87.390625,0
174.78125,-87.390625 87.390625,-174.78125 0,-87.390625"/><g transform="translate(-63.140625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="126.28125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Assistant Message</div></foreignObject></g></g><g
transform="translate(588.55078125, 971.44140625)" id="flowchart-FunctionMessage-11" class="node default default
flowchart-label"><polygon style="" transform="translate(-86.77734375,86.77734375)" class="label-container" points="86.77734375,0

```

173.5546875,-86.77734375 86.77734375,-173.5546875 0,-86.77734375"/><g transform="translate(-62.52734375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="125.0546875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Function Message</span></div></foreignObject></g></g><g
transform="translate(848.515625, 517.01171875)" id="flowchart-ClientsDatabase-13" class="node default default
flowchart-label"><rect height="33.5" width="134.453125" y="-16.75" x="-67.2265625" ry="0" rx="0" style="" class="basic
label-container"/><g transform="translate(-59.7265625, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="119.453125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Clients Database</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-72.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-72.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 336.1328125 419.5" style="max-width:
336.133px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

```

```

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M40.13114346590909,185L59.89053622159091,155.70833333333334C79.64992897727272,126.41666666666667,119.1687144
8863635,67.83333333333333,158.39974683038994,67.1034716077792C197.63077917214355,66.37360988222507,236.57405834
428707,123.49721976445012,256.0456979303588,152.05902470556268L275.5173375164306,180.6208296466752"/><path

```


marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-0"

d="M261.37413758116884,185L244.25969798430734,174.95833333333334C227.1452583874459,164.91666666666666,192.91637919372295,144.83333333333334,159.6271243094386,144.38279739932253C126.3378694251543,143.93226146531174,93.98823885030858,163.1145229306235,77.81342356288573,172.70565366327938L61.63860827546288,182.29678439593525"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-1"

d="M259.7109375,192.88706988927254L242.87369791666666,187.94755824106042C226.03645833333334,183.00804659284836,192.36197916666666,173.12902329642418,159.53439514305265,172.9303844576278C126.7068111194386,172.7317456188314,94.72612223887718,182.21349123766285,78.73577779859649,186.95436404707857L62.745433358315786,191.6952368564943"/>

><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-2"

d="M259.7109375,201.75L242.87369791666666,201.75C226.03645833333334,201.75,192.36197916666666,201.75,159.57083333333333,201.75C126.77968750000001,201.75,94.871875,201.75,78.91796875,201.75L62.9640625,201.75"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-3"

d="M259.7109375,210.61293011072746L242.87369791666666,215.55244175893958C226.03645833333334,220.49195340715164,192.36197916666666,230.37097670357582,159.53439514305265,230.5696155423722C126.7068111194386,230.7682543811686,94.72612223887718,221.28650876233715,78.73577779859649,216.54563595292143L62.745433358315786,211.8047631435057"/>

><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-4"

d="M261.37413758116884,218.5L244.25969798430734,228.54166666666666C227.1452583874459,238.58333333333334,192.91637919372295,258.66666666666667,159.6271243094386,259.11720260067744C126.3378694251543,259.56773853468826,93.98823885030858,240.38547706937652,77.81342356288573,230.79434633672065L61.63860827546288,221.20321560406475"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-5"

d="M270.8900500541126,218.5L252.18962504509383,234.95833333333334C233.48920003607506,251.41666666666666,196.08835001803754,284.33333333333333,159.54401666670006,284.9203950646548C122.99968331536259,285.50745679597634,87.31186663072516,253.76491359195265,69.46795828840646,237.8936419899408L51.62404994608776,222.022370387929"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-6"

d="M275.6480062905844,218.5L256.154588575487,241.375C236.6611708603896,264.25,197.6743354301948,310,159.46174714711466,310.6753014026366C121.24915886403453,311.35060280527324,83.81081772806905,266.9512056105464,65.09164716008631,244.75150701318304L46.37247659210358,222.55180841581964"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-A" id="L-B-A-7"

d="M278.5027800324675,218.5L258.5335666937229,247.79166666666666C238.56435335497835,277.08333333333333,198.62592667748916,335.66666666666667,159.39130720354834,336.39896100404684C120.15668772960748,337.131255341427,81.62587545921497,280.01251068285393,62.36046932401871,251.45313835356743L43.095063188822444,222.8937660242809"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-1"

d="M42.95592151988636,185L62.24451793323863,162.125C81.5331143465909,139.25,120.11030717329545,93.5,158.31938482977625,92.82767450080661C196.52846248625704,92.15534900161322,234.3694249725141,136.56069800322646,253.28990621564262,158.76337250403307L272.21038745877115,180.96604700483968"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-2"

d="M47.66388494318181,185L66.16782078598484,168.54166666666666C84.67175662878788,152.08333333333334,121.67962831439394,119.16666666666667,158.2208933499045,118.58307287286114C194.76215838541506,117.99947907905562,230.83681677083015,149.74895815811124,248.87414596353767,165.62369769763905L266.9114751562452,181.49843723716685"/></g><g class="edgeLabels"><g transform="translate(158.6875, 9.25)" class="edgeLabel"><g transform="translate(-47.40625, -9.25)" class="label"><foreignObject height="18.5" width="94.8125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User Message</div></foreignObject></g></g><g transform="translate(158.6875, 124.75)" class="edgeLabel"><g transform="translate(-43.02734375, -9.25)" class="label"><foreignObject height="18.5" width="86.0546875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Server Error</div></foreignObject></g></g><g
transform="translate(158.6875, 163.25)" class="edgeLabel"><g transform="translate(-70.45703125, -9.25)"
class="label"><foreignObject height="18.5" width="140.9140625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Command Response</div></foreignObject></g></g><g
transform="translate(158.6875, 201.75)" class="edgeLabel"><g transform="translate(-76.0234375, -9.25)"
class="label"><foreignObject height="18.5" width="152.046875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Agent Response Error</div></foreignObject></g></g><g
transform="translate(158.6875, 240.25)" class="edgeLabel"><g transform="translate(-75.62109375, -9.25)"
class="label"><foreignObject height="18.5" width="151.2421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Agent Response Start</div></foreignObject></g></g><g
transform="translate(158.6875, 278.75)" class="edgeLabel"><g transform="translate(-71.23046875, -9.25)"
class="label"><foreignObject height="18.5" width="142.4609375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Agent Response End</div></foreignObject></g></g><g
transform="translate(158.6875, 317.25)" class="edgeLabel"><g transform="translate(-68.62109375, -9.25)"
class="label"><foreignObject height="18.5" width="137.2421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Internal Monologue</div></foreignObject></g></g><g
transform="translate(158.6875, 355.75)" class="edgeLabel"><g transform="translate(-63.140625, -9.25)"
class="label"><foreignObject height="18.5" width="126.28125"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Assistant Message</div></foreignObject></g></g><g
transform="translate(158.6875, 394.25)" class="edgeLabel"><g transform="translate(-62.52734375, -9.25)"
class="label"><foreignObject height="18.5" width="125.0546875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Function Message</div></foreignObject></g></g><g
transform="translate(158.6875, 47.75)" class="edgeLabel"><g transform="translate(-61.796875, -9.25)" class="label"><foreignObject
height="18.5" width="123.59375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">Command Create</div></foreignObject></g></g><g
transform="translate(158.6875, 86.25)" class="edgeLabel"><g transform="translate(-54.8046875, -9.25)"

```

class="label"><foreignObject height="18.5" width="109.609375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="edgeLabel">Command Load</span></div></foreignObject></g></g></g><g
class="nodes"><g transform="translate(28.83203125, 201.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect
height="33.5" width="57.6640625" y="-16.75" x="-28.83203125" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-21.33203125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="42.6640625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Client</span></div></foreignObject></g></g><g transform="translate(289.921875, 201.75)" id="flowchart-B-1"
class="node default default flowchart-label"><rect height="33.5" width="60.421875" y="-16.75" x="-30.2109375" ry="0" rx="0" style=""
class="basic label-container"/><g transform="translate(-22.7109375, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="45.421875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Server</span></div></foreignObject></g></g></g></g></g></g></svg>

```

High_Level_Doc-73.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-73.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 520.8125 355.5" style="max-width:
520.812px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

```

```

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-User LE-WebSocketClient" id="L-User-WebSocketClient-0"

```

d="M227.361328125,32.40852533381173L218.5595703125,38.29877111150977C209.7578125,44.189016889207814,192.1542968
75,55.96950844460391,191.1483521760097,67.07680929854598C190.14240747701945,78.18411015248806,205.7340337040389,
88.6182203049761,213.5298468175486,93.83527538122014L221.3256599310583,99.05233045746418"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-WebSocketClient LE-WebSocketServer" id="L-WebSocketClient-WebSocketServer-0"

d="M225.73034428615196,135.5L217.20041711345996,141.20833333333334C208.670489940768,146.91666666666666,191.6106
35595384,158.33333333333334,190.87652153620172,169.2587217429107C190.14240747701945,180.18411015248807,205.7340
337040389,190.61822030497615,213.5298468175486,195.83527538122016L221.3256599310583,201.0523304574642"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-WebSocketServer LE-create_new_agent" id="L-WebSocketServer-create_new_agent-0"

d="M189.56568818933823,237.5L168.71099015778188,243.20833333333334C147.8562921262255,248.91666666666666,106.146
89606311275,260.33333333333333,91.467293962864,271.18469119327756C76.78769186261526,282.0360490532218,89.1378837
2523054,292.3220981064436,95.31297965653818,297.4651226330545L101.48807558784581,302.6081471596654"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-WebSocketServer LE-load_agent" id="L-WebSocketServer-load_agent-0"

d="M271.731263403799,237.5L278.87826637816585,243.20833333333334C286.0252693525327,248.91666666666666,300.31927
53012663,260.33333333333333,314.5839161714748,271.22969035849945C328.84855704168336,282.1260473836656,343.083832
83336667,292.50209476733113,350.2014707292083,297.6901184591639L357.31910862505003,302.8781421509967"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-create_new_agent LE-WebSocketServer" id="L-create_new_agent-WebSocketServer-0"

d="M145.78316482843138,306L152.63701235702615,300.2916666666667C159.49085988562092,294.58333333333333,173.198554
94281046,283.1666666666667,186.50920156222097,272.30126797195993C199.81984818163153,261.4358692772532,212.73344
636326306,251.12173855450632,219.1902454540788,245.96467319313288L225.64704454489458,240.8076078317595"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link
LS-load_agent LE-WebSocketServer" id="L-load_agent-WebSocketServer-0"

d="M407.5619638480392,306L415.3934334150327,300.2916666666667C423.22490298202615,294.58333333333333,438.88784211

601313,283.1666666666667,424.76627706730574,271.96444655934056C410.64471201859834,260.76222645201443,366.738642

7871968,249.7744529040289,344.785608171496,244.28056613003614L322.8325735557952,238.78667935604338"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-WebSocketServer LE-WebSocketClient" id="L-WebSocketServer-WebSocketClient-0"

d="M275.789186963848,204L284.31911413654,198.29166666666666C292.849041309232,192.58333333333334,309.90889565461

6,181.16666666666666,310.6430097137982,170.2412782570893C311.37712377298055,159.31588984751193,295.785497545961

1,148.88177969502388,287.9896844324514,143.66472461877984L280.19387131894166,138.4476695425358"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link

LS-WebSocketClient LE-User" id="L-WebSocketClient-User-0"

d="M275.789186963848,102L284.31911413654,96.29166666666667C292.849041309232,90.58333333333333,309.908895654616,

79.16666666666667,310.3711790739903,68.0593658127246C310.83346249336455,56.95206495878252,294.6981749867291,46.1

5412991756504,286.6305312334114,40.755162396956294L278.56288748009365,35.35619487634755"/></g><g

class="edgeLabels"><g transform="translate(174.55078125, 67.75)" class="edgeLabel"><g transform="translate(-76.7109375, -9.25)"

class="label"><foreignObject height="18.5" width="153.421875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Command or Message</div></foreignObject></g></g><g

transform="translate(174.55078125, 169.75)" class="edgeLabel"><g transform="translate(-76.7109375, -9.25)"

class="label"><foreignObject height="18.5" width="153.421875"><div style="display: inline-block; white-space: nowrap;"

xmlns="http://www.w3.org/1999/xhtml">Command or Message</div></foreignObject></g></g><g

transform="translate(64.4375, 271.75)" class="edgeLabel"><g transform="translate(-64.4375, -9.25)" class="label"><foreignObject

height="18.5" width="128.875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Create New Agent</div></foreignObject></g></g><g transform="translate(314.61328125, 271.75)"

class="edgeLabel"><g transform="translate(-69.67578125, -9.25)" class="label"><foreignObject height="18.5"

width="139.3515625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span

class="edgeLabel">Load Existing Agent</div></foreignObject></g></g><g transform="translate(186.90625, 271.75)"

class="edgeLabel"><g transform="translate(-38.03125, -9.25)" class="label"><foreignObject height="18.5" width="76.0625"><div

style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">New

Agent</div></foreignObject></g></g><g transform="translate(454.55078125, 271.75)" class="edgeLabel"><g
transform="translate(-50.26171875, -9.25)" class="label"><foreignObject height="18.5" width="100.5234375"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Existing
Agent</div></foreignObject></g></g><g transform="translate(326.96875, 169.75)" class="edgeLabel"><g
transform="translate(-55.70703125, -9.25)" class="label"><foreignObject height="18.5" width="111.4140625"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Agent
Response</div></foreignObject></g></g><g transform="translate(326.96875, 67.75)" class="edgeLabel"><g
transform="translate(-55.70703125, -9.25)" class="label"><foreignObject height="18.5" width="111.4140625"><div style="display:
inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Agent
Response</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(250.759765625, 16.75)"
id="flowchart-User-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375"
ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g
transform="translate(250.759765625, 118.75)" id="flowchart-WebSocketClient-1" class="node default default flowchart-label"><rect
height="33.5" width="135.546875" y="-16.75" x="-67.7734375" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-60.2734375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="120.546875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">WebSocketClient</div></foreignObject></g></g><g transform="translate(250.759765625, 220.75)"
id="flowchart-WebSocketServer-3" class="node default default flowchart-label"><rect height="33.5" width="138.3046875" y="-16.75"
x="-69.15234375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-61.65234375, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="123.3046875"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml">WebSocketServer</div></foreignObject></g></g><g
transform="translate(125.671875, 322.75)" id="flowchart-create_new_agent-5" class="node default default flowchart-label"><rect
height="33.5" width="147.75" y="-16.75" x="-73.875" ry="0" rx="0" style="" class="basic label-container"/><g
transform="translate(-66.375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="132.75"><div style="display:


```

inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">create_new_agent</span></div></foreignObject></g></g><g transform="translate(384.58203125, 322.75)"
id="flowchart-load_agent-7" class="node default default flowchart-label"><rect height="33.5" width="94.265625" y="-16.75"
x="-47.1328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-39.6328125, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="79.265625"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">load_agent</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-74.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-74.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 1204.34375 49.5" style="max-width:
1204.34px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

```

```

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M206.21875,16.75L227.3984375,16.75C248.578125,16.75,290.9375,16.75,332.4135416666667,16.75C373.88958333333335,16

.75,414.4822916666667,16.75,434.7786458333333,16.75L455.075,16.75"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M678.25,16.75L704.9856770833334,16.75C731.7213541666666,16.75,785.1927083333334,16.75,837.7807291666667,16.75C8

```

90.36875,16.75,942.0734375000001,16.75,967.92578125,16.75L993.778125,16.75"/></g><g class="edgeLabels"><g transform="translate(333.296875, 16.75)" class="edgeLabel"><g transform="translate(-102.078125, -9.25)" class="label"><foreignObject height="18.5" width="204.15625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">chat_completion_to_prompt</div></foreignObject></g></g><g transform="translate(838.6640625, 16.75)" class="edgeLabel"><g transform="translate(-135.4140625, -9.25)" class="label"><foreignObject height="18.5" width="270.828125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">output_to_chat_completion_response</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(103.109375, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="206.21875" y="-16.75" x="-103.109375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-95.609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="191.21875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Input: messages, functions</div></foreignObject></g></g><g transform="translate(569.3125, 16.75)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="217.875" y="-16.75" x="-108.9375" ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-101.4375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="202.875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">LLMChatCompletionWrapper</div></foreignObject></g></g><g transform="translate(1093.7109375, 16.75)" id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="189.265625" y="-16.75" x="-94.6328125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-87.1328125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="174.265625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Output: raw_llm_output</div></foreignObject></g></g></g></g></g></svg>

High_Level_Doc-75.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-75.svg):

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 455.796875 73" style="max-width:

455.797px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"

id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg

.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg

.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg

.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg

.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg

.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg

p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node

path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node

.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath

.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg

.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel

rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg

.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg

p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet

ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid

#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg

.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

```
id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"
cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,
0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"
id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M
10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"
refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;
stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g
class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal
edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"
d="M46.796875,22.94301204819277L56.40625,20.660843373493975C66.015625,18.37867469879518,85.234375,13.81433734939
759,103.58917771587461,13.395198449644981C121.94398043174924,12.976059549892375,139.43483586349848,16.702119099
784746,148.1802635793731,18.565148874730934L156.92569129524773,20.42817864967712"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-A" id="L-B-A-0"
d="M162.109375,35.46754636233952L152.5,37.51462196861627C142.890625,39.56169757489301,123.671875,43.655848787446
51,105.31255345040488,43.6248647987158C86.95323190080977,43.59388080998508,69.45333880161952,39.43776161997017,6
0.7033922520244,37.35970202496271L51.95344570242928,35.281642429955255"/><path
marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B
LE-C" id="L-B-C-0"
d="M227.5234375,22.114347688284933L238.50520833333334,19.970289740237444C249.48697916666666,17.826231792189954,
271.4505208333333,13.538115896094979,292.54490891172884,13.228181748557825C313.63929699012436,12.91824760102067
4,333.8645314802487,16.58649520204135,343.9771487253109,18.420619002551685L354.08976597037304,20.25474280306202
2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid
flowchart-link LS-C LE-B" id="L-C-B-0"
```

d="M359.3046875,35.799427698649296L348.3229166666667,37.791189748874416C337.3411458333333,39.78295179909953,315.3776041666667,43.76647589954977,294.28102695485217,43.78344432697249C273.18444974303765,43.80041275439521,252.9548369860753,39.85082550879042,242.84003060759412,37.87603188598803L232.72522422911294,35.90123826318563"/></g><g class="edgeLabels"><g transform="translate(104.453125, 9.25)" class="edgeLabel"><g transform="translate(-28.296875, -9.25)" class="label"><foreignObject height="18.5" width="56.59375"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Request</div></foreignObject></g></g><g transform="translate(104.453125, 47.75)" class="edgeLabel"><g transform="translate(-32.65625, -9.25)" class="label"><foreignObject height="18.5" width="65.3125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Response</div></foreignObject></g></g><g transform="translate(293.4140625, 9.25)" class="edgeLabel"><g transform="translate(-40.890625, -9.25)" class="label"><foreignObject height="18.5" width="81.78125"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Read/Write</div></foreignObject></g></g><g transform="translate(293.4140625, 47.75)" class="edgeLabel"><g transform="translate(-16.484375, -9.25)" class="label"><foreignObject height="18.5" width="32.96875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">Data</div></foreignObject></g></g></g><g class="nodes"><g transform="translate(23.3984375, 28.5)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5" width="46.796875" y="-16.75" x="-23.3984375" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-15.8984375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="31.796875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">User</div></foreignObject></g></g><g transform="translate(194.81640625, 28.5)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5" width="65.4140625" y="-16.75" x="-32.70703125" ry="0" rx="0" style="" class="basic label-container"/><g transform="translate(-25.20703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="50.4140625"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml">System</div></foreignObject></g></g><g transform="translate(399.55078125, 28.5)" id="flowchart-C-5" class="node default default flowchart-label"><rect height="33.5" width="80.4921875" y="-16.75" x="-40.24609375" ry="0" rx="0" style="" class="basic label-container"/><g

```
transform="translate(-32.74609375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="65.4921875"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Database</span></div></foreignObject></g></g></g></g></g></svg>
```

High_Level_Doc-8.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-8.svg):

```
<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 668.994140625 300" style="max-width:
668.994px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECFF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px:pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
```

```

ms",verdana,arial,sans-serif;}</style><g><marker orient="auto" markerHeight="12" markerWidth="12"

markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0

10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"

class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"

id="my-svg_flowchart-circleEnd"><circle style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" r="5" cy="5"

cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5" refX="-1"

viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-circleStart"><circle style="stroke-width: 1; stroke-dasharray: 1,

0;" class="arrowMarkerPath" r="5" cy="5" cx="5"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"

markerUnits="userSpaceOnUse" refY="5.2" refX="12" viewBox="0 0 11 11" class="marker cross flowchart"

id="my-svg_flowchart-crossEnd"><path style="stroke-width: 2; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M

10,1 l -9,9"/></marker><marker orient="auto" markerHeight="11" markerWidth="11" markerUnits="userSpaceOnUse" refY="5.2"

refX="-1" viewBox="0 0 11 11" class="marker cross flowchart" id="my-svg_flowchart-crossStart"><path style="stroke-width: 2;

stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 1,1 l 9,9 M 10,1 l -9,9"/></marker><g class="root"><g class="clusters"/><g

class="edgePaths"><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal

edge-pattern-solid flowchart-link LS-A LE-B" id="L-A-B-0"

d="M314.775390625,33.5L314.775390625,37.666666666666664C314.775390625,41.833333333333336,314.775390625,50.166666

666666664,314.775390625,57.616666666666667C314.775390625,65.066666666666666,314.775390625,71.63333333333334,314.77

5390625,74.91666666666667L314.775390625,78.2"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;"

class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-C" id="L-B-C-0"

d="M221.2501169535928,117L197.985123502994,121.16666666666667C174.7201300523952,125.33333333333333,128.19014315

11976,133.66666666666666,104.92514970059881,141.11666666666667C81.66015625,148.56666666666666,81.66015625,155.13

333333333333,81.66015625,158.41666666666666L81.66015625,161.7"/><path marker-end="url(#my-svg_flowchart-pointEnd)"

style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-B LE-D" id="L-B-D-0"

```


d="M343.6529986901198,117L350.83648328343315,121.16666666666667C358.01996787674653,125.33333333333333,372.3869370633733,133.66666666666666,379.5704216566866,141.11666666666667C386.75390625,148.56666666666666,386.75390625,155.13333333333333,386.75390625,158.41666666666666L386.75390625,161.7"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-C LE-E" id="L-C-E-0"

d="M81.66015625,200.5L81.66015625,204.66666666666666C81.66015625,208.83333333333334,81.66015625,217.16666666666666,86.76322267866301,224.98587470212962C91.86628910732604,232.80508273759256,102.07242196465207,240.1101654751851,107.17548839331509,243.7627068439814L112.2785548219781,247.41524821277764"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-D LE-F" id="L-D-F-0"

d="M386.75390625,200.5L386.75390625,204.66666666666666C386.75390625,208.83333333333334,386.75390625,217.16666666666666,396.19562903384957,225.16763745833225C405.6373518176992,233.16860824999787,424.52079738539834,240.83721649999575,433.9625201692479,244.67152062499466L443.40424295309754,248.5058247499936"/><path

marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-E LE-B" id="L-E-B-0"

d="M181.2360123502994,250.5L191.4961561252495,246.33333333333334C201.7562999001996,242.16666666666666,222.2765874500998,233.83333333333334,232.53673122504992,222.70833333333334C242.796875,211.58333333333334,242.796875,197.66666666666666,242.796875,183.75C242.796875,169.83333333333334,242.796875,155.91666666666666,249.21626004778634,145.2348705275514C255.63564509557264,134.55307438843616,268.47441519114534,127.10614877687236,274.89380023893165,123.38268597109044L281.313185286718,119.65922316530853"/><path marker-end="url(#my-svg_flowchart-pointEnd)" style="fill:none;" class="edge-thickness-normal edge-pattern-solid flowchart-link LS-F LE-B" id="L-F-B-0"

d="M518.4381549401197,250.5L525.621639533433,246.33333333333334C532.8051241267465,242.16666666666666,547.1720933133732,233.83333333333334,554.3555779066866,222.70833333333334C561.5390625,211.58333333333334,561.5390625,197.66666666666666,561.5390625,183.75C561.5390625,169.83333333333334,561.5390625,155.91666666666666,537.6902915291905,144.92335451953264C513.841520558381,133.9300423723986,466.1439786167621,125.86008474479716,442.29520764595264,121.82510593099646L418.4464366751432,117.79012711719574"/></g><g class="edgeLabels"><g class="edgeLabel"><g

transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g><g class="edgeLabel"><g
transform="translate(0, 0)" class="label"><foreignObject height="0" width="0"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"></div></foreignObject></g></g></g><g class="nodes"><g
transform="translate(314.775390625, 16.75)" id="flowchart-A-0" class="node default default flowchart-label"><rect height="33.5"
width="59.5625" y="-16.75" x="-29.78125" ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-22.28125,
-9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="44.5625"><div style="display: inline-block; white-space:
nowrap;" xmlns="http://www.w3.org/1999/xhtml">api.py</div></foreignObject></g></g><g
transform="translate(314.775390625, 100.25)" id="flowchart-B-1" class="node default default flowchart-label"><rect height="33.5"
width="196.890625" y="-16.75" x="-98.4453125" ry="5" rx="5" style="" class="basic label-container"/><g
transform="translate(-90.9453125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="181.890625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">get_lmstudio_completion</div></foreignObject></g></g><g transform="translate(81.66015625, 183.75)"
id="flowchart-C-3" class="node default default flowchart-label"><rect height="33.5" width="163.3203125" y="-16.75"
x="-81.66015625" ry="5" rx="5" style="" class="basic label-container"/><g transform="translate(-74.16015625, -9.25)" style=""
class="label"><rect/><foreignObject height="18.5" width="148.3203125"><div style="display: inline-block; white-space: nowrap;"

```

xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">ChatCompletions API</span></div></foreignObject></g></g><g
transform="translate(386.75390625, 183.75)" id="flowchart-D-5" class="node default default flowchart-label"><rect height="33.5"
width="217.9140625" y="-16.75" x="-108.95703125" ry="5" rx="5" style="" class="basic label-container"/><g
transform="translate(-101.45703125, -9.25)" style="" class="label"><rect/><foreignObject height="18.5" width="202.9140625"><div
style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Basic String
Completions API</span></div></foreignObject></g></g><g transform="translate(139.990234375, 267.25)" id="flowchart-E-7"
class="node default default flowchart-label"><rect height="33.5" width="272.2734375" y="-16.75" x="-136.13671875" ry="5" rx="5"
style="" class="basic label-container"/><g transform="translate(-128.63671875, -9.25)" style="" class="label"><rect/><foreignObject
height="18.5" width="257.2734375"><div style="display: inline-block; white-space: nowrap;"
xmlns="http://www.w3.org/1999/xhtml"><span class="nodeLabel">Response from ChatCompletions
API</span></div></foreignObject></g></g><g transform="translate(489.560546875, 267.25)" id="flowchart-F-9" class="node default
default flowchart-label"><rect height="33.5" width="326.8671875" y="-16.75" x="-163.43359375" ry="5" rx="5" style="" class="basic
label-container"/><g transform="translate(-155.93359375, -9.25)" style="" class="label"><rect/><foreignObject height="18.5"
width="311.8671875"><div style="display: inline-block; white-space: nowrap;" xmlns="http://www.w3.org/1999/xhtml"><span
class="nodeLabel">Response from Basic String Completions API</span></div></foreignObject></g></g></g></g></g></svg>

```

High_Level_Doc-9.svg

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc-9.svg):

```

<svg aria-roledescription="flowchart-v2" role="graphics-document document" viewBox="-8 -8 372.35546875 383.5" style="max-width:
372.355px; background-color: white;" xmlns:xlink="http://www.w3.org/1999/xlink" xmlns="http://www.w3.org/2000/svg" width="100%"
id="my-svg"><style>#my-svg{font-family:"trebuchet ms",verdana,arial,sans-serif;font-size:16px;fill:#333;}#my-svg
.error-icon{fill:#552222;}#my-svg .error-text{fill:#552222;stroke:#552222;}#my-svg .edge-thickness-normal{stroke-width:2px;}#my-svg
.edge-thickness-thick{stroke-width:3.5px;}#my-svg .edge-pattern-solid{stroke-dasharray:0;}#my-svg
.edge-pattern-dashed{stroke-dasharray:3;}#my-svg .edge-pattern-dotted{stroke-dasharray:2;}#my-svg
.marker{fill:#333333;stroke:#333333;}#my-svg .marker.cross{stroke:#333333;}#my-svg svg{font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:16px;}#my-svg .label{font-family:"trebuchet ms",verdana,arial,sans-serif;color:#333;}#my-svg

```

```
.cluster-label text{fill:#333;}#my-svg .cluster-label span,#my-svg p{color:#333;}#my-svg .label text,#my-svg span,#my-svg
p{fill:#333;color:#333;}#my-svg .node rect,#my-svg .node circle,#my-svg .node ellipse,#my-svg .node polygon,#my-svg .node
path{fill:#ECECF;stroke:#9370DB;stroke-width:1px;}#my-svg .flowchart-label text{text-anchor:middle;}#my-svg .node
.label{text-align:center;}#my-svg .node.clickable{cursor:pointer;}#my-svg .arrowheadPath{fill:#333333;}#my-svg .edgePath
.path{stroke:#333333;stroke-width:2.0px;}#my-svg .flowchart-link{stroke:#333333;fill:none;}#my-svg
.edgeLabel{background-color:#e8e8e8;text-align:center;}#my-svg .edgeLabel
rect{opacity:0.5;background-color:#e8e8e8;fill:#e8e8e8;}#my-svg .labelBkg{background-color:rgba(232, 232, 232, 0.5);}#my-svg
.cluster rect{fill:#ffffde;stroke:#aaaa33;stroke-width:1px;}#my-svg .cluster text{fill:#333;}#my-svg .cluster span,#my-svg
p{color:#333;}#my-svg div.mermaidTooltip{position:absolute;text-align:center;max-width:200px;padding:2px;font-family:"trebuchet
ms",verdana,arial,sans-serif;font-size:12px;background:hsl(80, 100%, 96.2745098039%);border:1px solid
#aaaa33;border-radius:2px;pointer-events:none;z-index:100;}#my-svg
.flowchartTitleText{text-anchor:middle;font-size:18px;fill:#333;}#my-svg :root{--mermaid-font-family:"trebuchet
ms",verdana,arial,sans-serif;}/><g><marker orient="auto" markerHeight="12" markerWidth="12"
markerUnits="userSpaceOnUse" refY="5" refX="6" viewBox="0 0 10 10" class="marker flowchart"
id="my-svg_flowchart-pointEnd"><path style="stroke-width: 1; stroke-dasharray: 1, 0;" class="arrowMarkerPath" d="M 0 0 L 10 5 L 0
10 z"/></marker><marker orient="auto" markerHeight="12" markerWidth="12" markerUnits="userSpaceOnUse" refY="5" refX="4.5"
viewBox="0 0 10 10" class="marker flowchart" id="my-svg_flowchart-pointStart"><path style="stroke-width: 1; stroke-dasharray: 1, 0;"
class="arrowMarkerPath" d="M 0 5 L 10 10 L 10 0 z"/></marker><marker orient="auto" markerHeight="11" markerWidth="11"
markerUnits="userSpaceOnUse" refY="5" refX="11" viewBox="0 0 10 10" class="marker flowchart"
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```

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```
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```

High_Level_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\High_Level_Doc.md):

Introduction :

The system is a sophisticated conversational AI platform powered by advanced AI models like GPT-4 or similar. It comprises numerous modules, each designed to perform specific tasks to facilitate the operation of the AI.

The system is designed to handle various types of messages including internal monologues, assistant messages, memory messages, system messages, user messages, and function messages. It can also create conversational AI agents that can interact, load and attach data, and process user messages.

The system interacts with various APIs, including the OpenAI API, to generate text based on given prompts and settings. It also includes modules for error handling, managing presets for the agent, generating a JSON schema from a Python function, and testing the functionality of various components of the system.

Additionally, the system includes modules for managing the state of the system in memory, loading data into archival storage, and managing WebSocket connections for real-time, full-duplex communication between the agent and multiple clients.

The system's performance depends on the underlying AI models used and the available system resources. It is designed to be reusable and adaptable for different scenarios by changing the configuration and the initial message from the user.

The system assumes that the necessary packages are installed and that the environment variables for the models and API keys are set correctly. It also assumes that the user initiates the chat.

Full System Overview

![diagram](./High_Level_Doc-1.svg)

Module Overview

Module: __main__.py

- **Module Name**: The name of the module is `__main__.py`. This is a special name in Python, and it's used for the file that is run as the main entry point of a program.

- **Primary Objectives**: The primary purpose of this module appears to be to import and run an ``app`` function from a ``main`` module.
- **Critical Functions**: The main function in this module is ``app()``. Without more context, it's hard to say what this function does, but it's likely the main function of your program.
- **Key Variables**: The key variable in this module is ``app``. It's a function imported from another module.
- **Interdependencies**: This module has a dependency on the ``main`` module, from which it imports the ``app`` function.
- **Core vs. Auxiliary Operations**: The core operation of this module is to run the ``app`` function. There don't appear to be any auxiliary operations in this module.
- **Operational Sequence**: The operational sequence of this module is straightforward: import the ``app`` function and then run it.
- **Performance Aspects**: Without more information about what the ``app`` function does, it's hard to comment on the performance aspects of this module.
- **Reusability**: This module could potentially be reused in any project that has a similar ``main`` module from which to import an ``app`` function.
- **Usage**: This module is used as the main entry point of a program. When you run a Python program, it starts by running the code in ``__main__.py``.
- **Assumptions**: The main assumption made in this module is that there is a ``main`` module that has an ``app`` function which can be run without any arguments.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-2.svg)

Module: agent.py

Here is a comprehensive analysis of the agent.py module:

Module Name: agent.py

Primary Objectives: Defines the Agent class, which handles conversational interactions between a human and an AI assistant.

The agent orchestrates passing messages between the human and AI, calling functions, and maintaining conversation state.

Critical Functions:

- `__init__`: Constructor to create an Agent instance, initializing key components like memory, messages, functions, etc.
- `step`: Main method to handle a human message, get AI response, execute any functions, and update state.
- `get_ai_reply`: Calls API to get AI response.
- `handle_ai_response`: Parses AI response, calls any functions, handles errors.
- `summarize_messages_inplace`: Summarizes old messages to reduce context length.
- `load` and `save`: Load/save agent state to disk.

Key Variables:

- `model`: AI model name (e.g. GPT-3)
- `memory`: CoreMemory object containing persona and dialog history
- `messages`: Full message log between human and AI
- `functions`: Available functions the AI can call

Interdependencies:

- ``Interface``: Abstract interface for handling messages/functions.
- ``PersistenceManager``: Abstract persistence manager for saving/loading state.
- ``openai_tools``: Utils for calling OpenAI API.
- ``functions/functions.py``: Available functions to call.

****Core vs Auxiliary Operations**:**

- Core: ``step``, ``get_ai_reply``, ``handle_ai_response``
- Auxiliary: ``load``, ``save``, ``summarize_messages_inplace``

****Operational Sequence**:**

1. ``step`` gets user message
2. Passes updated message history to ``get_ai_reply``
3. ``get_ai_reply`` calls API for AI response
4. ``handle_ai_response`` parses response, calls functions
5. ``step`` updates state with new messages

****Performance Aspects**:**

- Caching past responses
- Summarizing old messages
- Configurable context window size

****Reusability**:**

- Could be adapted for different AI models
- ``Interface`` allows different platforms (CLI, web, etc)
- ``PersistenceManager`` allows different storage backends

****Usage**:**

- Create `Agent` with config, model, memory, functions
- Call `agent.step(user_message)` to handle each user interaction

****Assumptions**:**

- Stateful conversation with persistent memory
- Messages are text-based
- Using an underlying large language model API

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-3.svg)

Module: agent_autoreply.py

- ****Module Name**:** agent_autoreply.py

- ****Primary Objectives**:** The purpose of this module is to demonstrate how to integrate the MemGPT model into an AutoGen group chat. It provides an example of how to replace the default "coder" agent in AutoGen with a MemGPT agent.

- **Critical Functions:**

- `create_memgpt_autogen_agent_from_config`: This function creates a MemGPT agent with the specified configuration.
- `UserProxyAgent`: This class creates a user agent that interacts with the other agents.
- `AssistantAgent`: This class creates an assistant agent that can play the role of a coder.
- `initiate_chat`: This method starts the group chat with a message from the user.

- **Key Variables:**

- `config_list`: This list contains the configuration for the model.
- `USE_MEMGPT`: This boolean variable determines whether to use the MemGPT model or not.
- `llm_config`: This dictionary contains the configuration for the language model.

- ``user_proxy``: This is the user agent.
- ``coder``: This is the coder agent, which can either be an AssistantAgent or a MemGPT agent depending on the ``USE_MEMGPT`` variable.
- **Interdependencies**: This module depends on the ``autogen`` and ``memgpt`` packages.
- **Core vs. Auxiliary Operations**: The core operation is the creation and configuration of the agents (either MemGPT or AssistantAgent), and the initiation of the chat. Auxiliary operations include setting up the configuration and environment variables.
- **Operational Sequence**: The module begins by setting up the configuration and creating the user agent. Then, based on the ``USE_MEMGPT`` variable, it either creates an AssistantAgent or a MemGPT agent. Finally, it initiates the chat with a message from the user.
- **Performance Aspects**: Performance depends on the underlying model (GPT-4 or similar) and the configuration settings. The use of MemGPT may improve performance due to its persistent memory capabilities.
- **Reusability**: The module is highly adaptable for reuse. By changing the configuration, one can use different models or agents. The chat initiation message can also be modified to suit different scenarios.
- **Usage**: This module is used to demonstrate how to integrate a MemGPT agent into an AutoGen group chat. It can be used as a template for similar tasks.
- **Assumptions**: The module assumes that the necessary packages (``autogen`` and ``memgpt``) are installed and that the `OPENAI_API_KEY` environment variable is set. It also assumes that the user wants to use a GPT-4 model.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-4.svg)

Module: agent_docs.py

- **Module Name**: The module is named `agent_docs.py`.

- **Primary Objectives**: The purpose of this module is to provide an example of how to integrate MemGPT into an AutoGen group chat and interact with documents. It demonstrates the setup process, how to create a group chat, and how to initiate a chat.

- **Critical Functions**:

- `create_autogen_memgpt_agent`: This function creates an AutoGen agent powered by MemGPT.

- `create_memgpt_autogen_agent_from_config`: This function creates a MemGPT AutoGen agent from a given configuration.

- `UserProxyAgent`: This class represents a user in the group chat.

- `GroupChat`: This class represents a group chat between the user and two LLM agents.

- `GroupChatManager`: This class manages the group chat.

- **Key Variables**:

- `config_list` and `config_list_memgpt`: These lists contain the configurations for creating AutoGen agents.

- `USE_AUTOGEN_WORKFLOW`: This boolean variable determines whether to use the AutoGen workflow or not.

- `DEBUG`: This boolean variable controls the debug mode.

- `interface_kwargs`: This dictionary contains interface-related configurations.

- `llm_config` and `llm_config_memgpt`: These dictionaries contain configurations for creating agents.

- `user_proxy`: This is an instance of `UserProxyAgent` representing the user in the group chat.

- `coder`: This is an instance of an AutoGen agent.

- `groupchat`: This is an instance of `GroupChat` representing the group chat.

- `manager`: This is an instance of `GroupChatManager` managing the group chat.

- **Interdependencies**: This module depends on the `autogen` and `memgpt` modules to create and manage the AutoGen group chat.

- **Core vs. Auxiliary Operations**: The core operations involve creating the AutoGen agents and initiating the group chat, while auxiliary operations include setting up configurations and debugging options.
 - **Operational Sequence**: The module first sets up configurations, creates the user proxy and the coder (AutoGen agent), initializes the group chat, and finally initiates the chat with a message from the user.
 - **Performance Aspects**: Performance considerations are not explicitly mentioned in the module. However, the performance could be influenced by the configurations of the AutoGen agents and the debugging options.
 - **Reusability**: This module is highly reusable. It can be used as a template to create AutoGen group chats with different configurations and agents.
 - **Usage**: This module is used as an example of how to create an AutoGen group chat with MemGPT and documents. It is used by importing the module and running it.
 - **Assumptions**: The module assumes that the necessary packages (``autogen`` and ``memgpt``) are installed and that the environment variable for the OpenAI API key is set. It also assumes that the user wants to initiate the chat with a specific message.
- ## Flow Diagram [via mermaid]
- ![diagram](./High_Level_Doc-5.svg)
- ## Module: agent_groupchat.py
- **Module Name**: agent_groupchat.py
 - **Primary Objectives**: This module is an example of how to integrate MemGPT into an AutoGen group chat. It sets up a simulated group chat environment where a user interacts with two agents: a product manager and a coder.

- **Critical Functions**:

- `create_autogen_memgpt_agent`: Creates a MemGPT agent for the group chat.
- `create_memgpt_autogen_agent_from_config`: Creates a MemGPT agent from a given configuration.
- `autogen.UserProxyAgent`: Creates a user agent.
- `autogen.AssistantAgent`: Creates an assistant agent.
- `autogen.GroupChat`: Initializes the group chat.
- `autogen.GroupChatManager`: Manages the group chat.

- **Key Variables**:

- `config_list` and `config_list_memgpt`: Configuration lists for AutoGen agents.
- `USE_MEMGPT`, `USE_AUTOGEN_WORKFLOW`, `DEBUG`: Flags to control the behavior of the program.
- `interface_kwargs`, `llm_config`, `llm_config_memgpt`: Configuration parameters.
- `user_proxy`, `pm`, `coder`: Agents participating in the group chat.
- `groupchat`, `manager`: Handles the group chat.

- **Interdependencies**: This module interacts with the AutoGen and MemGPT libraries.

- **Core vs. Auxiliary Operations**: The core operations involve setting up the group chat and managing the interactions between the user and the agents. Auxiliary operations include setting up the configuration and creating the agents.

- **Operational Sequence**: The module first sets up the configuration and creates the agents. Then, it initializes the group chat and begins the chat with a message from the user.

- **Performance Aspects**: The performance of this module would depend on the efficiency of the AutoGen and MemGPT libraries.

- **Reusability**: This module can be reused to set up different scenarios for a group chat with AutoGen and MemGPT agents. The

agents, their roles, and the initial message can be customized.

- **Usage**: This module is used to simulate a group chat environment where a user interacts with two agents: a product manager and a coder.

- **Assumptions**: The module assumes that the necessary libraries are installed and the environment variables are set correctly. It also assumes that the user initiates the chat.

Flow Diagram [via mermaid]

Module: airoboros.py

- **Module Name**: airoboros.py

- **Primary Objectives**: The purpose of this module is to provide a wrapper for the Airoboros 70b v2.1 model, which only generates JSON and no inner thoughts. The module also contains a class for a wrapper that does include inner monologue as a field.

- **Critical Functions**:

- `chat_completion_to_prompt(self, messages, functions)`: This method formats a prompt for the Airoboros model.

- `clean_function_args(self, function_name, function_args)`: This method cleans function arguments specific to the MemGPT model.

- `output_to_chat_completion_response(self, raw_llm_output)`: This method transforms raw LLM output into a ChatCompletion style response.

- **Key Variables**:

- `simplify_json_content`: This variable determines whether to simplify the JSON content.

- `clean_func_args`: This variable decides whether to clean function arguments.

- `include_assistant_prefix`: This variable determines whether to include the assistant prefix.

- ``include_opening_brance_in_prefix``: This variable decides whether to include the opening brace in the prefix.
- ``include_section_separators``: This variable determines whether to include section separators.
- **Interdependencies**: This module interacts with the ``wrapper_base`` (from which it inherits), ``json_parser`` for cleaning JSON, and ``errors`` for handling exceptions.
- **Core vs. Auxiliary Operations**: Core operations include formatting prompts for the Airoboros model, cleaning function arguments, and transforming raw LLM output. Auxiliary operations include the handling of various flags to control aspects of the formatting and cleaning processes.
- **Operational Sequence**: The operational sequence is primarily driven by the ``chat_completion_to_prompt`` function, which formats the prompt, followed by the ``clean_function_args`` function to clean function arguments, and finally the ``output_to_chat_completion_response`` function to transform the output.
- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the module is designed to handle JSON parsing, formatting, and cleaning efficiently.
- **Reusability**: The module is designed to be reusable, with the ability to handle various formatting and cleaning tasks related to the Airoboros model. It can be adapted for use with other models that require similar tasks.
- **Usage**: This module is used to interact with the Airoboros model, handling tasks such as formatting prompts, cleaning function arguments, and transforming model output.
- **Assumptions**: It is assumed that the first message is always from the system, and the role of the message can only be "user", "assistant", or "function". The module also assumes valid JSON format for the input and output.

Flow Diagram [via mermaid]

![[diagram]](/High_Level_Doc-7.svg)

Module: api.py

- **Module Name**: api.py

- **Primary Objectives**: The module's main purpose is to interact with an external API (LM Studio) to generate responses for prompts. It can either use the ChatCompletions API or the basic string completions API.

- **Critical Functions**:

- `get_lmstudio_completion(endpoint, prompt, context_window, settings=SIMPLE, api="chat")`: This function sends a request to the LM Studio API and retrieves the generated completion.

- **Key Variables**:

- `LMSTUDIO_API_CHAT_SUFFIX`: Used to construct the endpoint for the ChatCompletions API.
 - `LMSTUDIO_API_COMPLETIONS_SUFFIX`: Used to construct the endpoint for the basic string completions API.
 - `DEBUG`: A flag for debugging.
 - `endpoint`: The base URL for the API.
 - `prompt`: The input for the API to complete.
 - `context_window`: The maximum number of tokens to be generated.
 - `settings`: The settings for the generation.
 - `api`: The type of API to be used.
- **Interdependencies**: This module relies on the 'requests' library to send HTTP requests, the 'urllib.parse' library to join URLs, and the 'os' library to interact with the operating system. It also depends on the '.settings' and '..utils' modules for settings and utility functions respectively.
- **Core vs. Auxiliary Operations**: The core operation of this module is to interact with the LM Studio API to generate completions. The auxiliary operations include error handling and debugging.
- **Operational Sequence**: The function first checks if the number of tokens in the prompt exceeds the context window. Then, it prepares the request and sends it to the appropriate API endpoint based on the 'api' parameter. Finally, it handles the response, including error handling.
- **Performance Aspects**: Performance considerations include the number of tokens in the prompt and the context window, as well

as the response time of the API.

- **Reusability**: The module is highly reusable as it provides a function to interact with the LM Studio API, which can be used in different contexts.

- **Usage**: This module is used to generate completions for prompts using the LM Studio API.

- **Assumptions**: The module assumes that the LM Studio API is available and reachable at the provided endpoint. It also assumes that the number of tokens in the prompt does not exceed the context window.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-8.svg)

Module: api.py

- **Module Name**: api.py

- **Primary Objectives**: This module is designed to interact with the Llama.cpp API. It sends a POST request to the API with a provided prompt and receives a completion response.

- **Critical Functions**:

- `get_llamacpp_completion(endpoint, prompt, context_window, grammar=None, settings=SIMPLE)`: This function sends a POST request to the Llama.cpp API and returns the response. It also handles errors and exceptions related to the request.

- **Key Variables**:

- `LLAMACPP_API_SUFFIX`: This is the endpoint suffix for the Llama.cpp API.

- `SIMPLE`: This is the default settings for the API request.

- `endpoint`: This is the base URL for the API.

- `prompt`: This is the input for the API.

- `context_window`: This is the maximum context length.

- `grammar`: This is an optional parameter for a grammar file.

- `settings`: These are the settings for the API request.

- **Interdependencies**: This module depends on the `requests` library for sending HTTP requests, `os` and `urllib.parse` for URL and path handling, and custom modules `.settings` and `..utils` for loading settings and utility functions.
- **Core vs. Auxiliary Operations**: The core operation of this module is the `get_llamacpp_completion` function. The error handling within this function can be considered as auxiliary operations.
- **Operational Sequence**: The module first checks if the prompt exceeds the maximum context length. It then prepares the request with the provided settings and prompt. If a grammar file is provided, it is loaded and added to the request. The module then sends the POST request to the API and returns the response.
- **Performance Aspects**: The module doesn't seem to have any specific performance considerations. However, the performance might be influenced by the response time of the Llama.cpp API.
- **Reusability**: This module is highly reusable as it provides a function to interact with the Llama.cpp API which can be used in different contexts where API interaction is required.
- **Usage**: This module is used by importing it and calling the `get_llamacpp_completion` function with the necessary parameters.
- **Assumptions**: The module assumes that the provided endpoint starts with "http://" or "https://". It also assumes that the Llama.cpp server is running and reachable at the provided endpoint.

Flow Diagram [via mermaid]

Module: api.py

- **Module Name**: The module is named as `api.py`.

- **Primary Objectives**: The purpose of this module is to interact with the Koboldcpp API to generate text completions based on the given prompt and settings.

- **Critical Functions**: The main function in this module is `get_koboldcpp_completion()`. This function takes in parameters like endpoint, prompt, context_window, grammar, and settings. It sends a POST request to the API and returns the generated text.

- **Key Variables**: The key variables in this module are `KOBOLDCPP_API_SUFFIX`, `DEBUG`, `SIMPLE`, `endpoint`, `prompt`, `context_window`, `grammar`, `settings`, `request`, `URI`, `response`, and `result`.

- **Interdependencies**: This module interacts with other system components such as `settings` and `utils` modules. It uses the `SIMPLE` settings and the `load_grammar_file` and `count_tokens` functions from these modules.

- **Core vs. Auxiliary Operations**: The core operation is the interaction with the Koboldcpp API to generate text. The auxiliary operations include token counting, grammar file loading, and error handling.

- **Operational Sequence**: The sequence of operation is as follows:

1. Count the tokens in the prompt.
2. Prepare the request with the settings, prompt, and context window.
3. Load the grammar file if provided.
4. Send a POST request to the API.
5. Handle any errors and return the generated text.

- **Performance Aspects**: Performance considerations include ensuring the prompt does not exceed the maximum context length, and handling any non-200 response codes from the API.

- **Reusability**: This module is highly reusable. The `get_koboldcpp_completion()` function can be used to interact with the

Koboldcpp API from any part of the system that requires text generation.

- **Usage**: This module is used whenever text generation is required. It is invoked by providing the appropriate parameters to the `get_koboldcpp_completion()` function.

- **Assumptions**: The main assumption made in this module is that the Koboldcpp API is running and reachable at the provided endpoint.

Flow Diagram [via mermaid]

Module: api.py

- **Module Name**: The module is named `api.py`.

- **Primary Objectives**: This module is designed to interact with a web-based API. Specifically, it sends a text prompt to the OpenAI API and retrieves the generated completion.

- **Critical Functions**:

- `get_webui_completion`: This is the main function in the module. It takes in parameters like the endpoint, prompt, context window, settings, and grammar, and it sends a request to the OpenAI API. It then processes the response and returns the generated text.

- **Key Variables**:

- `WEBUI_API_SUFFIX`: This variable holds the suffix for the API endpoint.

- `DEBUG`: This variable is a flag for debugging.

- `endpoint`: This variable holds the URL of the API endpoint.

- `prompt`: This variable contains the text prompt to be sent to the API.

- `context_window`: This variable specifies the maximum number of tokens that the API should consider from the prompt.

- `settings`: This variable contains settings for the text generation.

- ``grammar``: This variable, if provided, contains grammar rules for the text generation.
 - ``request``: This variable holds the request to be sent to the API, including the prompt and settings.
 - ``URI``: This variable holds the complete URL of the API endpoint.
- **Interdependencies**: This module depends on the ``requests`` library for sending HTTP requests, and the ``urllib.parse`` library for manipulating URLs. It also depends on the ``settings`` and ``utils`` modules in the same package.
- **Core vs. Auxiliary Operations**: The core operation of this module is sending the request to the API and processing the response, done in the ``get_webui_completion`` function. Auxiliary operations include counting tokens in the prompt, loading a grammar file, and validating the endpoint URL.
- **Operational Sequence**: The ``get_webui_completion`` function first counts the tokens in the prompt and validates the context window. It then prepares the request, including setting the grammar if provided. It validates the endpoint URL, sends the request to the API, and processes the response. If the response is successful, it extracts the generated text and returns it.
- **Performance Aspects**: The performance of this module largely depends on the performance of the OpenAI API. If the API is slow or unresponsive, the module will also be slow. The module also includes some error handling for non-200 response codes.
- **Reusability**: This module is quite reusable. The ``get_webui_completion`` function can be used with any endpoint and text prompt, and with any settings and grammar that are compatible with the OpenAI API.
- **Usage**: This module is used by importing it and calling the ``get_webui_completion`` function with the appropriate parameters.
- **Assumptions**: This module assumes that the OpenAI API is available at the provided endpoint and that it responds with a JSON object that includes a ``choices`` array with a ``text`` field. It also assumes that the ``settings`` and ``grammar`` parameters are compatible with the API.

Flow Diagram [via mermaid]

Module: api.py

- **Module Name**: The module name is `api.py`.

- **Primary Objectives**: This module is designed to send a POST request to a specified API endpoint and return the response. It is particularly designed to work with the Ollama API for text generation.

- **Critical Functions**:

- `get_ollama_completion`: This function takes in several parameters including the API endpoint, the model to be used, the prompt, the context window, settings, and grammar. It constructs the API request, sends it, and returns the response.

- **Key Variables**:

- `OLLAMA_API_SUFFIX`: This is the suffix for the API endpoint.
- `DEBUG`: This boolean variable is used for debugging purposes.
- `request`: This dictionary contains the data to be sent in the API request.

- **Interdependencies**: This module depends on several other modules including `os`, `requests`, `urllib.parse`, and local modules such as `settings` and `utils`.

- **Core vs. Auxiliary Operations**:

- **Core Operations**: The core operation is the `get_ollama_completion` function which sends the API request and returns the response.

- **Auxiliary Operations**: Error handling and debugging print statements are auxiliary operations.

- **Operational Sequence**: The function first checks the validity of the inputs, then constructs the API request, sends it, and returns

the response.

- **Performance Aspects**: The performance of this module is dependent on the responsiveness of the API it interacts with. Error handling is implemented to manage potential issues.

- **Reusability**: This module is specific to the Ollama API but can be adapted for use with other APIs that require similar request structures.

- **Usage**: This module is used to interact with the Ollama API, sending a POST request and returning the received response.

- **Assumptions**: The module assumes that the API endpoint is correctly formatted and the API server is reachable. It also assumes that the `model` parameter is not `None`.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-12.svg)

Module: base.py

- **Module Name**: base.py

- **Primary Objectives**: This module provides a set of functions for interacting with a human user, managing conversation and memory, and performing search operations within the conversation and archival memory.

- **Critical Functions**:

1. `send_message()` : Sends a message to the human user.
2. `pause_heartbeats()` : Temporarily ignore timed heartbeats.
3. `core_memory_append()` : Appends content to a section of the core memory.
4. `core_memory_replace()` : Replaces content in a section of the core memory.
5. `conversation_search()` : Searches prior conversation history using case-insensitive string matching.

6. ``conversation_search_date()``: Searches prior conversation history using a date range.
7. ``archival_memory_insert()``: Adds content to archival memory.
8. ``archival_memory_search()``: Searches archival memory using semantic (embedding-based) search.

- **Key Variables**:

1. ``message``: The message content to be sent or processed.
2. ``minutes``: The number of minutes to ignore heartbeats for.
3. ``name``, ``content``, ``old_content``, ``new_content``: Variables related to memory management.
4. ``query``, ``page``, ``start_date``, ``end_date``: Variables related to search operations.

- **Interdependencies**: This module interacts with the ``interface``, ``memory``, and ``persistence_manager`` components of the system.

- **Core vs. Auxiliary Operations**: Core operations include sending messages, managing memory, and performing search operations. Auxiliary operations include pausing heartbeats and formatting search results.

- **Operational Sequence**:

1. A message is sent or a command is given.
2. The appropriate function is invoked, such as sending a message, updating memory, or performing a search.
3. The function performs its task and returns a result or status message.

- **Performance Aspects**: This module is designed for efficient memory management and search operations. It uses case-insensitive string matching and semantic search for efficient retrieval of conversation history and archival memory.

- **Reusability**: The functions provided in this module are general-purpose and can be reused across different conversations and sessions.

- **Usage**: This module is used to manage the conversation with the user, update and query the conversation and archival memory, and control the system's responsiveness.

- **Assumptions**:

1. It is assumed that the input parameters for each function are provided in the correct format and type.
2. It is also assumed that the memory management and persistence components are functioning correctly.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-13.svg)

Module: chat_completion_proxy.py

- **Module Name**: The module name is "chat_completion_proxy.py".

- **Primary Objectives**: The primary purpose of this module is to create a drop-in replacement for an agent's ChatCompletion call that runs on an OpenLLM backend. It facilitates communication with the backend, converts the message sequence into a prompt that the model expects, and processes the response.

- **Critical Functions**:

- `get_chat_completion`: This is the main function of the module. It requires the model, messages, context_window, endpoint, and endpoint_type. It handles the communication with the backend, the conversion of the message sequence into a prompt, and the processing of the response.

- `get_available_wrappers`: This function returns all available wrappers.

- `get_webui_completion`, `get_webui_completion_legacy`, `get_lmstudio_completion`, `get_llamacpp_completion`, `get_koboldcpp_completion`, `get_ollama_completion`: These functions are used to get completions from different types of endpoints.

- **Key Variables**:

- `endpoint`: This is the base URL of the API.

- `endpoint_type`: This determines the type of endpoint to be used.

- ``DEBUG``: This is a boolean variable used for debugging.
- ``has_shown_warning``: This is used to control the display of warnings.
- ``available_wrappers``: This is a list of all available wrappers.
- **Interdependencies**: This module interacts with several other system components. It imports functions from other modules such as ``webui.api``, ``webui.legacy_api``, ``lmstudio.api``, ``llamacpp.api``, ``koboldcpp.api``, ``ollama.api``, ``llm_chat_completion_wrappers``, ``constants``, ``utils``, ``prompts.gpt_summarize``, and ``errors``.
- **Core vs. Auxiliary Operations**: The core operation of this module is the ``get_chat_completion`` function, which communicates with the backend, converts the message sequence into a prompt, and processes the response. Auxiliary operations include the retrieval of available wrappers and the processing of different types of completions.
- **Operational Sequence**: The operational sequence starts with the ``get_chat_completion`` function, which checks the validity of the input, determines the wrapper to use, converts the message sequence into a prompt, gets the completion from the appropriate endpoint, and processes the response.
- **Performance Aspects**: The performance of this module depends on the efficiency of the conversion of the message sequence into a prompt, the speed of the communication with the backend, and the processing of the response.
- **Reusability**: This module is highly reusable. It can be used with different models, messages, and endpoints.
- **Usage**: This module is used to create a drop-in replacement for an agent's ChatCompletion call that runs on an OpenLLM backend.
- **Assumptions**: The module assumes that the `context_window`, `endpoint`, and `endpoint_type` are provided for the ``get_chat_completion`` function. It also assumes that the endpoint is reachable and returns a valid response.

Flow Diagram [via mermaid]

Module: cli.py

- **Module Name**: cli.py

- **Primary Objectives**: The module is primarily used for running and configuring the MemGPT agent. It also contains functions to attach data to the agent and check the version.

- **Critical Functions**:

- `run()`: This method is used to start chatting with a MemGPT agent. It includes various parameters like persona, agent, human, model, debug, etc.

- `attach()`: This method is used to load the data contained in a data source into the agent's memory.

- `version()`: This method is used to print and return the version of memgpt.

- **Key Variables**:

- `agent`: Specifies the agent name.

- `persona`: Specifies the persona.

- `human`: Specifies the human.

- `model`: Specifies the LLM model.

- `debug`: Enables debugging output.

- `config`: Holds the configuration for MemGPT.

- **Interdependencies**: This module interacts with several other modules such as `memgpt`, `typer`, `json`, `sys`, `io`, `logging`, `os`, `prettytable`, `questionary`, `openai`, `llama_index`, `memgpt.interface`, `memgpt.cli.cli_config`, `memgpt.agent`, `memgpt.system`, `memgpt.presets.presets`, `memgpt.constants`, `memgpt.personas.personas`, `memgpt.humans.humans`, `memgpt.utils`, `memgpt.persistence_manager`, `memgpt.config`, `memgpt.embeddings`, and `memgpt.openai_tools`.

- **Core vs. Auxiliary Operations**: The core operations of this module are running the agent, attaching data to the agent, and checking the version. Auxiliary operations include setting up the logger, loading or creating agent configuration, and pretty printing agent configuration.

- **Operational Sequence**: The module starts with importing necessary libraries and then defines the main functions. The `run`

function is the main entry point for running the agent. If the agent config doesn't exist, it will create a new one; otherwise, it will use the existing one. The `attach` function is for attaching data to the agent, and `version` is for checking the memgpt version.

- **Performance Aspects**: The performance of this module largely depends on the configurations set and the data provided. The module uses an efficient way of loading data into the agent's memory in batches to optimize memory usage.

- **Reusability**: The module is highly reusable. It's designed to run different agents with various configurations, attach different data sources to the agents, and check the version.

- **Usage**: This module is used as a command-line interface for interacting with the MemGPT agent.

- **Assumptions**: The module assumes that the necessary libraries are installed and the agent configurations are set correctly. It also assumes that the data source provided in the `attach` function contains the correct data for the agent.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-15.svg)

Module: cli_config.py

- **Module Name**: This is the "cli_config.py" module.

- **Primary Objectives**: This module is responsible for configuring the MemGPT model and its components. It allows for the setting of various parameters and elements including model endpoints, model types, context window, embedding endpoints, CLI configurations, and archival storage among others.

- **Critical Functions**:

- `get_azure_credentials()` : Retrieves Azure credentials from the environment variables.

- `get_openai_credentials()` : Retrieves OpenAI credentials from the environment variables.

- `configure_llm_endpoint(config: MemGPTConfig)` : Configures the model endpoint.

- `configure_model(config: MemGPTConfig, model_endpoint_type: str)` : Configures the model, model wrapper and context window.

- `configure_embedding_endpoint(config: MemGPTConfig)` : Configures the embedding endpoint.

- `configure_cli(config: MemGPTConfig)` : Configures the CLI with preset, persona, human, and agent.

- `configure_archival_storage(config: MemGPTConfig)` : Configures the archival storage backend.

- ``configure()``: Updates default MemGPT configurations.
- ``list(option: str)``: Lists all agents, humans, personas or data sources.
- ``add(option: str, name: str, text: str, filename: str)``: Adds a persona or human.

- **Key Variables**:

- ``app``: Instance of the Typer application.
- ``azure_key`, `azure_endpoint`, `azure_version`, `azure_deployment`, `azure_embedding_deployment``: Azure credentials.
- ``openai_key``: OpenAI API key.
- ``model_endpoint_type`, `model_endpoint``: Model endpoint configurations.
- ``model`, `model_wrapper`, `context_window``: Model configurations.
- ``embedding_endpoint_type`, `embedding_endpoint`, `embedding_dim``: Embedding configurations.
- ``default_preset`, `default_persona`, `default_human`, `default_agent``: CLI configurations.
- ``archival_storage_type`, `archival_storage_uri``: Archival storage configurations.

- **Interdependencies**: This module interacts with other system components such as the ``questionary``, ``typer``, ``os``, ``shutil``, ``openai``, ``prettytable``, ``memgpt`` and other utility modules.

- **Core vs. Auxiliary Operations**: The core operations of this module are the configuration of the model, embedding endpoint, CLI, and archival storage. Auxiliary operations include retrieving Azure and OpenAI credentials, listing agents, humans, personas or data sources, and adding a persona or human.

- **Operational Sequence**: The sequence starts with retrieving credentials, then configuring the model endpoint, model, embedding endpoint, CLI, and archival storage. After configuration, the module can list or add agents, humans, personas, or data sources.

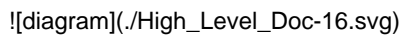
- **Performance Aspects**: The performance of this module depends on the successful retrieval of credentials and configuration of the different components. Errors in any of these steps can lead to performance issues.

- **Reusability**: This module is highly reusable as it provides a standardized way to configure the MemGPT model and its components, which can be used across different projects and applications.

- **Usage**: This module is used to configure the MemGPT model and its components. It can be used by calling the `configure()` function, after which the model can be used as per the set configurations.

- **Assumptions**: The module assumes that the necessary environment variables for Azure and OpenAI are set. It also assumes that the directories for personas and humans exist.

Flow Diagram [via mermaid]

A flow diagram showing the process of loading data into MemGPT, likely involving steps like configuration, data source selection, and storage.

Module: cli_load.py

- **Module Name**: cli_load.py

- **Primary Objectives**: This Python module is designed to load data into MemGPT's archival storage. It supports loading data from different sources such as directories, webpages, databases, and vector databases.

- **Critical Functions**:

- `store_docs(name, docs, show_progress=True)`: This function embeds and stores documents.

- `load_index(name: str, dir: str)`: This function loads a LlamaIndex saved VectorIndex into MemGPT.

- `load_directory(name: str, input_dir: str, input_files: List[str], recursive: bool)`: This function loads data from a directory.

- `load_webpage(name: str, urls: List[str])`: This function loads data from webpages.

- `load_database(name: str, query: str, dump_path: str, scheme: str, host: str, port: int, user: str, password: str, dbname: str)`: This function loads data from a database.

- `load_vector_database(name: str, uri: str, table_name: str, text_column: str, embedding_column: str)`: This function loads pre-computed embeddings into MemGPT from a database.

- **Key Variables**:

- `name`: The name of the dataset to load.

- ``docs``: The documents to be embedded and stored.
- ``dir``: The path to the directory containing the index.
- ``input_dir``, ``input_files``: The path to the directory or files containing the dataset.
- ``urls``: The list of URLs to load.
- ``query``, ``dump_path``, ``scheme``, ``host``, ``port``, ``user``, ``password``, ``dbname``: The parameters for database connection.
- ``uri``, ``table_name``, ``text_column``, ``embedding_column``: The parameters for vector database connection.
- **Interdependencies**: This module interacts with other system components such as ``memgpt.embeddings``, ``memgpt.connectors.storage``, ``memgpt.config``, and ``llama_index``.
- **Core vs. Auxiliary Operations**: The core operations of this module are the loading of data from different sources and storing them. The auxiliary operations include the embedding of documents and creating storage connectors.
- **Operational Sequence**: The sequence of operations depends on the source of the data. The general sequence is to load the data, embed the documents, and store them into the storage.
- **Performance Aspects**: Performance considerations include the efficiency of data loading, embedding, and storing. The module uses `tqdm` for progress bars to provide feedback on long-running operations.
- **Reusability**: This module is highly reusable as it provides a generic framework for loading data from different sources. The loading functions can be easily adapted for different sources or datasets.
- **Usage**: The module is used by calling the appropriate load function with the necessary arguments. For example, to load data from a directory, you would call ``load_directory()`` with the name of the dataset and the directory path.
- **Assumptions**: The module assumes that the provided data is in a suitable format for the chosen load function. For example, when loading data from a database, it assumes that the database connection parameters are correct. It also assumes that the embedding dimension of the loaded data matches the configuration.

Flow Diagram [via mermaid]

Module: config.py

Here is a comprehensive analysis of the config.py module:

****Module Name****: config.py

****Primary Objectives****: Defines configuration classes and utilities to load MemGPT agent and runtime configuration from files.

Provides helpers to interactively create new configs.

****Critical Functions****:

- MemGPTConfig: Dataclass for main MemGPT config loaded from config file. Handles model, embedding, storage configs.
- AgentConfig: Dataclass for agent-specific config. Stores persona, model, embedding info.
- Config: Helper class to initialize configs from flags or interactive prompts. Handles personas.

****Key Variables****:

- MEMGPT_DIR: Base directory for MemGPT data storage.
- model_choices: Available models for interactive config.
- LLM_MAX_TOKENS: Context length limits per model.

****Interdependencies****:

- Depends on model wrappers, personas, humans, presets defined elsewhere. Saves configs to disk.

****Core vs Auxiliary Operations****:

- Core: Loading/saving configs, prompting for settings, config dataclasses.
- Auxiliary: Indentation, persona text helpers.

****Operational Sequence****:

1. Load default config from file or create new one interactively.
2. Override settings from flags or interactive prompts.
3. Save updated config to file.

****Performance Aspects**:**

- Avoid reloading config repeatedly. Cache and reuse.
- Config files enable quick launch without prompts.

****Reusability**:**

- Configs encapsulate all settings in shareable files.
- Dataclasses provide reusable config objects.

****Usage**:**

- Created at launch to configure MemGPT runtime environment.
- AgentConfig used to persist agent-specific settings.

****Assumptions**:**

- Config file in expected MEMGPT_DIR location.
- Personas and humans in expected subdirs.

Module: constants.py

- ****Module Name****: The module name is "constants.py".
- ****Primary Objectives****: The primary purpose of this module is to define constants that are used throughout the application. In this case, it defines a single constant, TIMEOUT, which presumably is used to set a time limit for some operation or operations.
- ****Critical Functions****: This module does not contain any functions or methods. It only defines a constant.
- ****Key Variables****: The key variable in this module is TIMEOUT. It is set to 30, which is presumably a time in seconds.

- **Interdependencies**: As a constants module, it may not have dependencies of its own, but other modules in the system might depend on the constants it defines. Any module that needs to use a timeout of 30 seconds would likely import this constant from this module.
- **Core vs. Auxiliary Operations**: This module does not perform any operations, core or auxiliary. It simply provides a value that other modules can use.
- **Operational Sequence**: There is no operational sequence in this module, as it does not perform operations.
- **Performance Aspects**: There are no direct performance aspects to this module as it simply defines a constant. However, the value of the TIMEOUT constant could indirectly affect performance in other modules that use it. For example, if TIMEOUT is used as a limit for a network operation, setting it to a higher value could slow down the application, while setting it to a lower value could lead to incomplete operations or errors.
- **Reusability**: This module is highly reusable. Any part of the system that needs to use a timeout of 30 seconds can import the TIMEOUT constant from this module. Furthermore, if the need arises for a different timeout value in the future, a new constant can be added to this module.
- **Usage**: To use this module, other modules would import it and then use the TIMEOUT constant. For example, in Python, this might look like: `from constants import TIMEOUT`.
- **Assumptions**: The main assumption here is that TIMEOUT is a suitable name for this constant, and that a value of 30 seconds is appropriate for the timeout in question. Further assumptions might depend on how and where the TIMEOUT constant is used in the rest of the system.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-18.svg)

Module: constants.py

- **Module Name**: The module is named "constants.py".

- **Primary Objectives**: This module's purpose is to define the default endpoints for different services and the default AI model and wrapper. It serves as a centralized place for managing these constants, which are used throughout the application.

- **Critical Functions**: This module does not contain any functions or methods. It only defines constant values.

- **Key Variables**:

- `DEFAULT_ENDPOINTS`: This is a dictionary that maps service names to their default endpoints.

- `DEFAULT_OLLAMA_MODEL`: This is a string that specifies the default AI model.

- `DEFAULT_WRAPPER`: This is an instance of the default wrapper class.

- `DEFAULT_WRAPPER_NAME`: This is a string that specifies the name of the default wrapper.

- **Interdependencies**: This module is dependent on the `airoboros` module from `memgpt.local_llm.llm_chat_completion_wrappers`.

- **Core vs. Auxiliary Operations**: As this module only defines constants, it does not have any operations.

- **Operational Sequence**: There is no operational sequence in this module as it only defines constants.

- **Performance Aspects**: Since this module only contains constant definitions, it does not have significant performance considerations.

- **Reusability**: This module is highly reusable. The constants defined in this module can be imported and used in any other module that requires these values.

- **Usage**: Other modules import this module when they need to use the constants it defines. For example, a module that needs to make a request to one of the services would import `DEFAULT_ENDPOINTS` and use it to get the endpoint for the service.

- **Assumptions**: It is assumed that the endpoints and the AI model specified in this module are correct and available. If these values are incorrect or the services or model are not available, it could cause errors in other parts of the application that use these constants.

Flow Diagram [via mermaid]

Module: constants.py

- **Module Name**: constants.py

- **Primary Objectives**: This module is designed to store and manage constants, including directory paths, model names, message strings, token limits, memory limits, and function parameters. It provides a centralized location for managing these constants, reducing the likelihood of errors and making the code easier to maintain.

- **Critical Functions**: This module does not contain any functions. It only declares and initializes constants.

- **Key Variables**: Some of the key variables include:

- `MEMGPT_DIR`: Directory path for memgpt.

- `DEFAULT_MEMGPT_MODEL`: Default model used for memgpt.

- `LLM_MAX_TOKENS`: Dictionary that maps models to their maximum token limit.

- `MESSAGE_SUMMARY_WARNING_FRAC`, `MESSAGE_SUMMARY_TRUNC_TOKEN_FRAC`, and

`MESSAGE_SUMMARY_TRUNC_KEEP_N_LAST`: Constants for conversation length and truncation.

- `CORE_MEMORY_PERSONA_CHAR_LIMIT` and `CORE_MEMORY_HUMAN_CHAR_LIMIT`: Constants for memory limits.

- `RETRIEVAL_QUERY_DEFAULT_PAGE_SIZE`: Default page size for retrieval queries.

- **Interdependencies**: This module does not interact with other system components directly. However, the constants defined here are likely used across the system, creating indirect dependencies.
- **Core vs. Auxiliary Operations**: All operations in this module are auxiliary since they support the core functionalities of the system by providing constants.
- **Operational Sequence**: Not applicable as this module does not contain any operational flow.
- **Performance Aspects**: This module does not have any direct impact on performance. However, the constants defined here, such as token limits or memory limits, can indirectly affect the system's performance.
- **Reusability**: This module is highly reusable. The constants defined here can be imported and used in any other module in the system.
- **Usage**: This module is used to provide constants to the rest of the system. Other modules import the required constants from this module.
- **Assumptions**: The module assumes that the directory in which memgpt is stored and the default model will not change. It also assumes that the token limits for the models are fixed.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-20.svg)

Module: constants.py

Module Name: constants.py

Primary Objectives: This module is designed to store constant values that are used throughout the application. This can include

configuration settings, default values, and any other values that remain consistent across the application.

****Critical Functions****: As this is a constants file, it does not contain any functions or methods. Its primary role is to store static data.

****Key Variables****:

- ``DEFAULT_PORT``: This variable is used to define the default port on which the application will run.

- ``CLIENT_TIMEOUT``: This variable is used to define the maximum amount of time the application will wait for a client response before timing out.

****Interdependencies****: This module interacts with any other modules or components that require the use of these constants. These could be networking modules, client modules, server modules, etc.

****Core vs. Auxiliary Operations****: The operations of this module are auxiliary, as it does not perform any core functionalities but provides support to them by supplying constant values.

****Operational Sequence****: There is no distinct flow in this module as it only contains static data.

****Performance Aspects****: This module does not have any direct impact on performance. However, the values of the constants can indirectly affect the performance of the modules that use them. For example, a lower ``CLIENT_TIMEOUT`` could make the application seem more responsive at the risk of prematurely timing out slower clients.

****Reusability****: This module is highly reusable. The constants defined in this module can be imported and used in any other module within the application. Changes to the constants will also be reflected in all modules that import them.

****Usage****: This module is used by importing the required constants into another module. For example, ``from constants import DEFAULT_PORT``.

****Assumptions****: It is assumed that the values of `DEFAULT_PORT` and `CLIENT_TIMEOUT` are suitable for the application's needs and that any changes to these values are made with an understanding of their impact on the rest of the application.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-21.svg)

Module: db.py

- ****Module Name****: db.py

- ****Primary Objectives****: This module is designed to provide database connectivity and operations for a system, likely an AI model, that works with textual passages. It supports two types of database connectors: PostgresStorageConnector and LanceDBConnector.

- ****Critical Functions****:

- `get_db_model(table_name: str)` : Generates a SQLAlchemy model for the provided table name.
- `PostgresStorageConnector` : A class that provides methods for connecting to a PostgreSQL database and performing CRUD operations.
- `LanceDBConnector` : A class that provides methods for connecting to a LanceDB database and performing CRUD operations.

- ****Key Variables****:

- `table_name` : The name of the table in the database.
- `config` : An instance of the MemGPTConfig class.
- `engine` : SQLAlchemy engine instance for database connectivity.
- `Session` : SQLAlchemy sessionmaker instance for database session management.

- ****Interdependencies****: This module relies on several external libraries such as SQLAlchemy, psycopg, pgvector, and lancedb for database operations. It also uses MemGPTConfig and StorageConnector from the memgpt module.

- **Core vs. Auxiliary Operations**: Core operations include creating database models, establishing database connections, and performing CRUD operations. Auxiliary operations include sanitizing table names and listing loaded data.
 - **Operational Sequence**: The typical sequence of operations would involve initializing a database connector (either `PostgresStorageConnector` or `LanceDBConnector`), specifying the table name, and then performing the desired database operations (insertion, retrieval, deletion, etc.).
 - **Performance Aspects**: The module uses pagination to retrieve records, which can help manage memory usage when dealing with large datasets. It also uses SQLAlchemy's sessionmaker for efficient database session management.
 - **Reusability**: The module is highly reusable. The database model and connector classes can be used with different table names and configurations, making them adaptable for various database schemas and systems.
 - **Usage**: This module is used whenever the system needs to interact with a database, whether it's to store, retrieve, update, or delete data.
 - **Assumptions**: The module assumes that the database URI is provided in the `MemGPTConfig`. It also assumes that the Postgres database has the vector extension installed, and that the LanceDB database is accessible via the provided URI.
- ## Flow Diagram [via mermaid]
- ![diagram](./High_Level_Doc-22.svg)
- ## Module: dolphin.py
- **Module Name**: `dolphin.py`
 - **Primary Objectives**: This module is a wrapper for Dolphin 2.1 Mistral 7b, which is a language model. The module is designed to format prompts that only generate JSON and no inner thoughts.

- **Critical Functions**:

- `__init__`: Initializes the Dolphin21MistralWrapper class with several parameters.
- `chat_completion_to_prompt`: Converts chat completion to a prompt.
- `create_function_description`: Creates a function description in airoboros style.
- `create_function_call`: Converts ChatCompletion to Airoboros style function trace (in prompt).
- `clean_function_args`: Cleans function arguments.
- `output_to_chat_completion_response`: Turns raw LLM output into a ChatCompletion style response.

- **Key Variables**:

- `simplify_json_content`: Simplify the JSON content or not.
- `clean_func_args`: Clean function arguments or not.
- `include_assistant_prefix`: Include assistant prefix or not.
- `include_opening_brace_in_prefix`: Include opening brace in prefix or not.
- `include_section_separators`: Include section separators or not.

- **Interdependencies**: This module interacts with the wrapper_base and json_parser modules, as well as the errors module in the parent directory.

- **Core vs. Auxiliary Operations**: Core operations include creating function descriptions, cleaning function arguments, and converting outputs to chat completion responses. Auxiliary operations include initializing the class and formatting the prompt.

- **Operational Sequence**: The module begins by initializing the class and its parameters. It then converts chat completions to prompts, creates function descriptions, cleans function arguments, and finally converts outputs to chat completion responses.

- **Performance Aspects**: This module is designed for performance and efficiency, as it includes functions for cleaning arguments and simplifying JSON content.

- **Reusability**: This module can be reused in different contexts where Dolphin 2.1 Mistral 7b wrapper is needed.

- **Usage**: The module is used by calling the Dolphin21MistralWrapper class and using its functions to work with the Dolphin 2.1 Mistral 7b language model.

- **Assumptions**: The module assumes that the input will be in a specific format, and it includes error handling to deal with scenarios where the input does not meet these assumptions.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-23.svg)

Module: embeddings.py

- **Module Name**: The module name is `embeddings.py`.

- **Primary Objectives**: The purpose of this module is to return the LlamaIndex embedding model to be used for embeddings. It supports different types of embedding endpoints including OpenAI, Azure, and Hugging Face.

- **Critical Functions**: The main function in this module is `embedding_model()`. This function loads the configuration, checks the type of embedding endpoint (OpenAI, Azure, or default to Hugging Face), and returns the corresponding embedding model.

- **Key Variables**:

- `config`: Holds the loaded configuration.

- `endpoint`: Stores the type of embedding endpoint.

- `model`: The embedding model to be used.

- **Interdependencies**: This module interacts with other system components such as `typer`, `os`, `llama_index.embeddings`, `memgpt.config`, and potentially `HuggingFaceEmbedding`.

- **Core vs. Auxiliary Operations**: The core operation is the creation and return of the appropriate embedding model based on the configuration. The auxiliary operations include loading the configuration and setting the environment variable for Hugging Face.
- **Operational Sequence**: The function first loads the configuration, then checks the type of embedding endpoint. If it's OpenAI or Azure, it returns the corresponding embedding model. If not, it defaults to the Hugging Face model.
- **Performance Aspects**: The performance of this module depends on the efficiency of the chosen embedding model and the speed of the API endpoints.
- **Reusability**: This module is highly reusable as it allows for the flexible selection of an embedding model based on the configuration.
- **Usage**: This module is used whenever an embedding model is needed. The type of model returned is determined by the ``embedding_endpoint_type`` in the configuration.
- **Assumptions**: The module assumes that the configuration loaded correctly and that the specified embedding endpoint type is supported. It also assumes that the necessary API keys and endpoints are correctly provided in the configuration.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-24.svg)

Module: errors.py

- **Module Name**: The module is named ``errors.py``.
- **Primary Objectives**: The primary purpose of this module is to define and handle various types of errors related to LLM (Local Link Manager). It provides a mechanism to raise and catch specific exceptions in the LLM context.

- **Critical Functions**: The main functions are the constructors (`__init__`) of the exception classes `LLMError`, `LLMJSONParsingError`, `LocalLLMError`, and `LocalLLMConnectionError`. They initialize the error messages for their respective exceptions.
- **Key Variables**: The key variable in this module is `self.message`, which stores the error message for each exception.
- **Interdependencies**: This module does not appear to interact directly with other system components, but it can be imported and used wherever error handling is necessary in the larger system context.
- **Core vs. Auxiliary Operations**: The core operations of this module are defining and initializing the exceptions. There do not appear to be any auxiliary operations.
- **Operational Sequence**: When an exception is raised, its `__init__` method is called, setting the `message` attribute. When the exception is caught, this message can be accessed and logged or displayed to provide information about the error.
- **Performance Aspects**: As this module is primarily related to error handling, its performance impact should be minimal. The main performance consideration is ensuring that exceptions are handled efficiently to avoid unnecessary disruptions to the program flow.
- **Reusability**: This module is highly reusable. The defined exceptions can be imported and used in any part of the system where LLM-related errors need to be handled.
- **Usage**: To use this module, import the required exceptions at the top of the Python file. When an error condition is detected, raise the appropriate exception. In the try/except block where the LLM operation is performed, catch the exception and handle it appropriately, such as by logging the error message and terminating the operation.
- **Assumptions**: The main assumption is that these exceptions will be raised and caught correctly in the rest of the system. It is also

assumed that the error messages provided are sufficient to understand and address the error.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-25.svg)

Module: extras.py

- **Module Name**: extras.py

- **Primary Objectives**: This module is primarily designed to provide additional utility functions for interacting with the AI model, file handling, and generating HTTP requests.

- **Critical Functions**:

- `message_chatgpt`: This function sends a message to a basic AI, ChatGPT, and gets a reply. It does not retain memory of previous interactions.

- `read_from_text_file`: This function reads lines from a text file, given a filename, starting line, and the number of lines to read.

- `append_to_text_file`: This function appends content to a text file.

- `http_request`: This function generates an HTTP request and returns the response.

- **Key Variables**:

- `message_sequence` in `message_chatgpt`: It's a list that holds system and user messages.

- `filename`, `line_start`, `num_lines` in `read_from_text_file`: These variables are used to specify the file and the lines to read.

- `filename`, `content` in `append_to_text_file`: These are used to specify the file and the content to append.

- `method`, `url`, `payload_json` in `http_request`: These are used to specify the HTTP request details.

- **Interdependencies**: This module depends on the `os`, `json`, `requests`, `typing.Optional` libraries, and `memgpt.constants` and `memgpt.openai_tools` modules.

- **Core vs. Auxiliary Operations**: Core operations include sending messages to ChatGPT, reading from a text file, appending to a

text file, and generating HTTP requests. Auxiliary operations include validation and error handling within these operations.

- **Operational Sequence**: Each function in the module can be used independently as per requirements. The sequence of operations would depend on the specific use case.

- **Performance Aspects**: The performance of this module depends on the efficiency of the I/O operations (file and HTTP requests) and the response time of the ChatGPT model.

- **Reusability**: Each function in the module is designed to be reusable in various scenarios - interacting with ChatGPT, handling text files, and making HTTP requests.

- **Usage**: This module is used when there's a need to interact with the ChatGPT model, perform file operations, or generate HTTP requests.

- **Assumptions**:

- The file paths provided exist and are accessible.
- The message sent to ChatGPT is a full English sentence.
- The HTTP method provided is valid and the URL is accessible.
- For GET requests, the payload is ignored.
- The payload for non-GET requests is a valid JSON string.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-26.svg)

Module: functions.py

- **Module Name**: The module name is `functions.py`.

- **Primary Objectives**: This module's purpose is to load and manage sets of functions. It provides a way to load functions from a

module, generate a JSON schema for them, and handle them in a dictionary. It also allows loading all function sets from a directory, including user-provided and built-in ones.

- **Critical Functions**:

- `load_function_set(module)`: This function loads the functions from a given module and generates a schema for each of them.
- `load_all_function_sets(merge=True)`: This function loads all function sets from a directory. It can merge all functions from all sets into the same level dict or return a nested dict where the top level is organized by the function set name.

- **Key Variables**:

- `function_dict`: A dictionary that stores the functions and their generated schema from a module.
- `schemas_and_functions`: A dictionary that stores the function sets and their associated functions and schemas.

- **Interdependencies**: This module interacts with other components such as `schema_generator` from `memgpt.functions` and `MEMGPT_DIR` from `memgpt.constants`. It also interacts with Python's built-in modules like `os`, `sys`, `importlib`, and `inspect`.

- **Core vs. Auxiliary Operations**: The core operations include loading function sets from a module and generating their schemas. Auxiliary operations include handling exceptions and validating the uniqueness of function names.

- **Operational Sequence**: The module first defines the paths of the scripts and function sets directories. It then lists all Python files in these directories. The module then iterates over these files, imports the modules, and loads the function sets. If the `merge` parameter is set to `True`, it will merge all functions from all sets into the same level dict.

- **Performance Aspects**: The module is designed to efficiently load and manage function sets. However, the performance may be affected when dealing with a large number of function sets or large modules.

- **Reusability**: The module is highly reusable. The functions `load_function_set` and `load_all_function_sets` can be used to load

and manage function sets from any module or directory.

- **Usage**: This module is used to load and manage function sets. It is particularly useful in projects where functions are organized in modules and directories, and there is a need to dynamically load and handle these functions.

- **Assumptions**: The module assumes that all function names within a set are unique. It also assumes that the directories and files it interacts with exist and are accessible.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-27.svg)

Module: generate_embeddings_for_docs.py

- **Module Name**: The module name is `generate_embeddings_for_docs.py`.

- **Primary Objectives**: The primary objective of this module is to generate embeddings for documents. It reads the documents from a file, processes them, and generates embeddings using OpenAI's API.

- **Critical Functions**:

- `generate_requests_file(filename)`: This function generates a file of requests which can be fed to the OpenAI API to generate embeddings.

- `generate_embedding_file(filename, parallel_mode)`: This function generates the embeddings for the documents in the file. It can work in parallel mode or sequential mode.

- `main()`

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-28.svg)

Module: gpt_functions.py

Flow Diagram [via mermaid]

![[diagram]](/High_Level_Doc-29.svg)

Module: gpt_summarize.py

- **Module Name**: The module is named `gpt_summarize.py`.
- **Primary Objectives**: This module's purpose is to summarize a history of previous messages in a conversation between an AI persona and a human. The summary is from the AI's perspective and must be less than a given word limit.
- **Critical Functions**: The main function of this module is to generate a summary of the conversation. However, the specific functions/methods aren't provided in the given context.
- **Key Variables**: The key variable is `WORD_LIMIT`, which determines the maximum length of the summary.
- **Interdependencies**: The module interacts with the conversation history and the AI's messages. It also relies on the system's ability to distinguish between different roles ('assistant', 'user', 'function') and events (login, heartbeat).
- **Core vs. Auxiliary Operations**: The core operation is the summarization of the conversation. Auxiliary operations could include parsing the conversation, identifying the roles and messages, and ensuring the word limit isn't exceeded.
- **Operational Sequence**: The module likely begins by parsing the conversation history, identifying the roles and messages, then generates a summary from the AI's perspective, and finally ensures the summary doesn't exceed the word limit.
- **Performance Aspects**: Performance considerations may include the efficiency of the summarization algorithm and the ability to process large conversation histories within the word limit.
- **Reusability**: This module could potentially be reused for summarizing any conversation, provided the conversation follows the same structure of roles and messages.

- **Usage**: This module is used to generate a concise summary of a conversation between an AI and a human, useful for understanding the context and content of the conversation without needing to read the entire conversation history.

- **Assumptions**: The module assumes that the AI's messages are marked with the 'assistant' role, function outputs are marked with the 'function' role, and user messages and system events are marked with the 'user' role. It also assumes that the conversation follows a certain structure and that the AI's inner monologue is not visible to the user.

Module: gpt_system.py

Module Name: gpt_system.py

Primary Objectives: The primary objective of this module is to retrieve system text based on a given key.

Critical Functions:

1. `get_system_text(key)`: This function takes a key as input and retrieves the corresponding system text. It first checks if the text file exists in the "prompts/system/" directory. If the file exists, it reads the content of the file and returns it. If the file does not exist in the "prompts/system/" directory, it checks in the "~/.memgpt/system_prompts/" directory. If the file is found in the "~/.memgpt/system_prompts/" directory, it reads the content of the file and returns it. If the file is not found in either directory, it raises a `FileNotFoundError`.

Key Variables:

- `filename`: Stores the name of the text file based on the given key.
- `file_path`: Stores the path of the text file.
- `user_system_prompts_dir`: Stores the path of the "~/.memgpt/system_prompts/" directory.

Interdependencies: This module depends on the `os` module and the `MEMGPT_DIR` constant from the `memgpt.constants` module.

Core vs. Auxiliary Operations: The core operation of this module is the ``get_system_text()`` function, which retrieves the system text.

There are no auxiliary operations in this module.

Operational Sequence: The operational sequence of this module is as follows:

1. Check if the text file exists in the "prompts/system/" directory.
2. If the file exists, read the content and return it.
3. If the file does not exist in the "prompts/system/" directory, check in the "~/memgpt/system_prompts/" directory.
4. If the file is found, read the content and return it.
5. If the file is not found in either directory, raise a `FileNotFoundError`.

Performance Aspects: The performance of this module depends on the size of the text files and the efficiency of file operations.

Reading the content of large text files may impact performance.

Reusability: This module can be reused in any system that requires retrieving system text based on keys. It can be easily integrated into different codebases.

Usage: This module is used to retrieve system text by providing a key as input. It can be used in various applications where dynamic system text is required.

Assumptions: This module assumes that the text files exist in either the "prompts/system/" directory or the "~/memgpt/system_prompts/" directory. It also assumes that the user has the necessary permissions to read the files.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-30.svg)

Module: humans.py

- **Module Name**: The module is named humans.py.

- **Primary Objectives**: The purpose of this module is to fetch and return the contents of a text file given its key. If the key does not include a .txt extension, it appends it before trying to open the file.
- **Critical Functions**: The main function in this module is `get_human_text(key=DEFAULT, dir=None)`. This function takes in a key and a directory. If no directory is provided, it sets the directory to the examples folder in the current file's directory. It then constructs a file path and attempts to open and read the file at that path. If the file does not exist, it raises a `FileNotFoundError`.
- **Key Variables**:
 - `key`: This is the name of the text file to be read.
 - `dir`: This is the directory where the file is located.
 - `DEFAULT`: This is the default key used if no key is provided.
 - `file_path`: This is the full path to the file constructed using `dir` and `key`.
- **Interdependencies**: This module depends on the `os` module for interacting with the file system.
- **Core vs. Auxiliary Operations**: The core operation of this module is reading a file and returning its contents. The construction of the file path and the handling of the `FileNotFoundError` are auxiliary operations that support the core operation.
- **Operational Sequence**: The function first checks if a directory is provided, if not it sets the directory to the examples folder. It then constructs the file path using the directory and key. It then tries to open and read the file, returning the contents if successful and raising a `FileNotFoundError` if not.
- **Performance Aspects**: The performance of this module depends on the file system's speed and the size of the text file being read.
- **Reusability**: This module is highly reusable. It can be used in any situation where you need to read the contents of a text file

given its name and optionally its directory.

- **Usage**: This module can be used by importing it and calling the `get_human_text` function with the appropriate arguments.

- **Assumptions**: This module assumes that the file to be read is a text file and is located either in the provided directory or the examples directory in the current file's directory. It also assumes that the file exists, and if it doesn't, it raises a `FileNotFoundError`.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-31.svg)

Module: interface.py

- **Module Name**: interface.py

- **Primary Objectives**: This module primarily serves as an interface for handling MemGPT-related events, including user messages, internal monologue, assistant messages, and function calls. It also includes a command-line interface for dumping agent events.

- **Critical Functions**:

- `user_message(self, msg)`: Handles the receipt of a user message.
- `internal_monologue(self, msg)`: Handles the generation of some internal monologue.
- `assistant_message(self, msg)`: Handles the use of `send_message`.
- `function_message(self, msg)`: Handles the call of a function.
- `print_messages(message_sequence, dump=False)`: Prints a sequence of messages.
- `print_messages_simple(message_sequence)`: Prints a simple sequence of messages.
- `print_messages_raw(message_sequence)`: Prints a raw sequence of messages.

- **Key Variables**:

- `DEBUG`: A boolean variable that controls the level of message output in the terminal.
- `STRIP_UI`: A boolean variable that controls whether to strip the user interface.

- ``msg``: A string or dictionary representing a message.
- **Interdependencies**: This module interacts with the ``abc``, ``json``, ``re``, ``colorama``, and ``memgpt.utils`` modules.
- **Core vs. Auxiliary Operations**: Core operations involve handling different types of messages (user, assistant, function, etc.) and printing them. Auxiliary operations involve formatting and color-coding the messages for better readability.
- **Operational Sequence**: When a message is received, the appropriate handler function is called based on the type of the message. If the message is to be printed, it is passed to one of the `print_messages` functions, which formats the message and prints it to the console.
- **Performance Aspects**: This module primarily involves I/O operations, so its performance depends on the efficiency of these operations.
- **Reusability**: This module is highly reusable. The ``AgentInterface`` class can be subclassed to create new interfaces for handling MemGPT-related events. The ``CLIInterface`` class provides a basic command-line interface that can be used in any program that needs to dump agent events to the console.
- **Usage**: This module is used to handle and display MemGPT-related events in a user-friendly manner.
- **Assumptions**: The module assumes that all messages are either strings or dictionaries. It also assumes that all messages can be formatted and color-coded for display in the console.

Flow Diagram [via mermaid]

Module: interface.py

- **Module Name**: interface.py

- **Primary Objectives**: The module is designed to manage and display messages in a chat-based interface. It provides a way to handle different types of messages (such as user messages, system messages, assistant messages, memory messages, and function messages), format them for display, and manage a buffer for these messages.

- **Critical Functions**:

- `set_message_list`: Sets the message list for the DummyInterface.
- `internal_monologue`: Handles internal monologue messages.
- `assistant_message`: Handles assistant messages.
- `memory_message`: Handles memory messages.
- `system_message`: Handles system messages.
- `user_message`: Handles user messages.
- `function_message`: Handles function messages.
- `reset_message_list`: Clears the buffer, called before every step when using MemGPT+AutoGen.
- `__init__`: Initializes the AutoGenInterface with various parameters.

- **Key Variables**:

- `message_list`: A list holding all the messages.
- `fancy`: A boolean variable to control the display of colored outputs and emoji prefixes.
- `show_user_message`, `show_inner_thoughts`, `show_function_outputs`: Booleans to control the display of different types of messages.
- `debug`: A boolean to control the debug mode.

- **Interdependencies**: The module relies on the `json` and `re` modules for parsing and regular expression operations, and `colorama` for colored terminal text.

- **Core vs. Auxiliary Operations**: Core operations include handling and displaying different types of messages. Auxiliary operations include managing the message buffer and controlling the display settings.

- **Operational Sequence**: The module defines two classes: DummyInterface and AutoGenInterface. The DummyInterface provides a basic structure for message handling, while the AutoGenInterface extends this with additional functionality. The AutoGenInterface initializes with various parameters, handles different types of messages, and manages a buffer for these messages.

- **Performance Aspects**: The module is designed for efficient handling and display of messages. The use of a buffer helps to manage the flow of messages and the various display options allow for flexible and efficient use.

- **Reusability**: The module is highly reusable. The classes defined can be used as a base for any chat-based interface that needs to handle and display a variety of message types.

- **Usage**: The module is used to handle and display messages in a chat-based interface. It is used by creating an instance of the AutoGenInterface class and calling the appropriate methods to handle different types of messages.

- **Assumptions**: It is assumed that messages are provided in a specific format (e.g., as a string or a dictionary). It's also assumed that the colorama module is available for colored terminal text.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-33.svg)

Module: json_parser.py

- **Module Name**: json_parser.py

- **Primary Objectives**: This module is designed to parse JSON data, handle errors, and repair malformed JSON strings. It is intended to extract information from JSON strings and deal with any inconsistencies or errors that may occur during the extraction process.

- **Critical Functions**:

- `extract_first_json(string)`: Extracts the first JSON object from a string.
- `add_missing_heartbeat(llm_json)`: Inserts heartbeat requests into messages that should have them.
- `repair_json_string(json_string)`: Repairs a JSON string where line feeds were accidentally added within string literals.
- `repair_even_worse_json(json_string)`: Repairs a malformed JSON string where string literals are broken up and not properly enclosed in quotes.
- `clean_json(raw_llm_output, messages=None, functions=None)`: Tries a bunch of hacks to parse the data coming out of the LLM.

- **Key Variables**:

- `depth` and `start_index` in `extract_first_json(string)`: Used to track the depth of nested JSON objects and the start index of the first JSON object.
- `new_string`, `in_string`, and `escape` in `repair_json_string(json_string)`: Used to create the repaired JSON string and track the current state of the string parsing.
- `in_message`, `in_string`, `escape`, `message_content`, and `new_json_parts` in `repair_even_worse_json(json_string)`: Used to track the current state of the string parsing and store the parts of the repaired JSON string.
- `data` in `clean_json(raw_llm_output, messages=None, functions=None)`: Stores the parsed JSON data.

- **Interdependencies**: This module seems to be independent of other system components, but it imports the `json` module for JSON operations and `memgpt.utils` for debugging purposes.

- **Core vs. Auxiliary Operations**: The core operations of this module include the extraction, repair, and cleaning of JSON strings. Auxiliary operations include error handling and debugging.

- **Operational Sequence**: The `clean_json` function attempts to parse the JSON data and, if it encounters errors, it tries various methods to repair the JSON string until it succeeds or exhausts all possibilities.

- **Performance Aspects**: The module's performance may be affected by the size of the input JSON string and the extent of its malformation. More complex or larger JSON strings may require more processing time.
- **Reusability**: The functions in this module are highly reusable for any tasks that involve parsing and repairing JSON strings.
- **Usage**: This module is used to parse and repair JSON strings in a larger system, likely as part of data preprocessing or cleanup.
- **Assumptions**: The module assumes that the input is a JSON string or can be converted into one. It also assumes that any errors encountered during parsing are due to malformation of the JSON string and can be fixed by one of the repair methods.

Flow Diagram [via mermaid]

(./High_Level_Doc-34.svg)

Module: legacy_api.py

- **Module Name**: The module is named as `legacy_api.py`.
- **Primary Objectives**: The purpose of this module is to interact with a web server to generate text based on the provided prompt and settings. It also validates the input and handles the response from the server.
- **Critical Functions**: The main function in this module is `get_webui_completion()`. This function makes a POST request to the specified endpoint with the given prompt and settings, and returns the generated text.
- **Key Variables**:
 - `endpoint`: The API endpoint to which the request is sent.
 - `prompt`: The text prompt for the text generation.
 - `context_window`: The maximum number of tokens that the context can contain.
 - `settings`: The settings for the text generation.

- ``grammar``: The grammar file to be used for text generation.
 - ``request``: The request object containing the prompt and settings.
 - ``URI``: The full URL of the API endpoint.
 - ``response``: The response received from the server.
 - ``result``: The generated text.
- **Interdependencies**: This module interacts with the ``requests`` library for making HTTP requests, the ``urllib.parse`` library for URL manipulation, and the ``legacy_settings`` and ``utils`` modules from the same project.
- **Core vs. Auxiliary Operations**: The core operation of this module is making the POST request to the server and handling the response. The auxiliary operations include validating the input, constructing the URL, and loading the grammar file.
- **Operational Sequence**: The function first validates the input, constructs the request object and the URL, and then makes the POST request. It then checks the response status code and returns the generated text if the request was successful.
- **Performance Aspects**: The performance of this module depends on the efficiency of the network request and the server's response time. In addition, the ``count_tokens()`` function and the loading of the grammar file can also affect the performance.
- **Reusability**: This module is highly reusable as it provides a generic function for making POST requests to a text generation server. The function can be used with different prompts, settings, and grammar files.
- **Usage**: This module can be used in any project that requires text generation based on a prompt and specific settings. The user needs to provide the server endpoint, the prompt, and the settings.
- **Assumptions**: The module assumes that the server endpoint starts with "http://" or "https://", and that the server is running and reachable. It also assumes that the prompt does not exceed the maximum context length.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-35.svg)

Module: legacy_settings.py

- **Module Name**: The module name is `legacy_settings.py`.

- **Primary Objectives**: This module seems to handle settings related to text processing and tokenization in a legacy system. It defines stopping strings and maximum new tokens, which are likely used for parsing or generating text.

- **Critical Functions**: The module does not seem to contain any functions or methods. It appears to be a configuration file.

- **Key Variables**:

- `stopping_strings`: A list of strings that signal the end of a text segment.

- `max_new_tokens`: The maximum number of new tokens that can be generated, set to 3072.

- `truncation_length`: This variable seems to be commented out but it likely sets the maximum length of a text segment. It appears to be set to a constant `LLM_MAX_TOKENS` imported from another module.

- **Interdependencies**: The module imports `LLM_MAX_TOKENS` from a `constants` module. It likely interacts with other parts of the system that require these settings, including text parsing and generating components.

- **Core vs. Auxiliary Operations**: As a configuration file, it does not seem to have core or auxiliary operations. All the settings it provides are essential for the components that depend on it.

- **Operational Sequence**: There doesn't appear to be a distinct operational sequence in this module as it is a configuration file.

- **Performance Aspects**: The settings in this module likely affect the system's performance. For example, `max_new_tokens` could limit the size of generated text, and `stopping_strings` could impact the speed of text parsing.

- **Reusability**: This module seems highly reusable. The settings it provides could be used by any component that needs to parse or generate text.

- **Usage**: This module is likely used by importing it into other parts of the system. The importing components can then access the settings it provides.

- **Assumptions**: The module seems to assume that the `stopping_strings` are sufficient to signal the end of a text segment. It also assumes that `max_new_tokens` is an appropriate limit for the size of generated text. The commented-out `truncation_length` suggests that there may be an assumption about the maximum length of a text segment.

Flow Diagram [via mermaid]

![[diagram]](./High_Level_Doc-36.svg)

Module: local.py

- **Module Name**: The module is named 'local.py'.

- **Primary Objectives**: The module's primary purpose is to handle data storage and retrieval operations locally, using the LlamaIndex library for data indexing and storage.

- **Critical Functions**:

- `__init__`: Initializes the LocalStorageConnector class, sets up the context, and loads or creates the index.

- `get_nodes`: Returns the nodes in the Llama index.

- `add_nodes`: Adds nodes to the Llama index.

- `get_all_paginated`: Returns all passages in the index, paginated.

- `get_all`: Returns all passages up to a specified limit.

- `get`: Placeholder function to get a specific passage by id.

- `insert`: Inserts a passage into the index.

- ``insert_many``: Inserts multiple passages into the index.
- ``query``: Queries the index for passages based on a given query and vector.
- ``save``: Saves the current state of the nodes to a pickle file.
- ``list_loaded_data``: Lists all the data sources currently loaded.
- ``size``: Returns the size of the index.

- ****Key Variables****:

- ``self.name``: The name of the storage connector.
- ``self.save_directory``: The directory where the index is saved.
- ``self.embed_model``: The embedding model used.
- ``self.service_context``: The service context for the Llama index.
- ``self.save_path``: The path where the nodes pickle file is saved.
- ``self.nodes``: The list of nodes in the index.
- ``self.index``: The Llama index itself.

- ****Interdependencies****: This module interacts with other system components such as the ``memgpt`` and ``llama_index`` modules for configurations, constants, storage, and indexing.

- ****Core vs. Auxiliary Operations****: Core operations include initializing the class, getting and adding nodes, and querying the index.

Auxiliary operations include saving the index, listing loaded data, and getting the size of the index.

- ****Operational Sequence****: The module initializes the class and loads or creates the index. It then provides functions to add nodes, get nodes, query the index, and save the index.

- ****Performance Aspects****: The module uses Llama index for efficient storage and retrieval of data. However, the ``query`` function may be slow due to the retrieval process.

- **Reusability**: The module is highly reusable, as it provides a generic local storage connector that can be used with any data that can be indexed with Llama index.

- **Usage**: The module is used to handle local data storage and retrieval operations. It is used to add nodes to the index, get nodes from the index, query the index, and save the index.

- **Assumptions**: The module assumes that the embedding model and service context are set up correctly. It also assumes that the nodes pickle file exists if the save path exists.

Flow Diagram [via mermaid]

Module: main.py

Here is a comprehensive analysis of the provided Python module `main.py`:

Module Name: main

Primary Objectives: This is the main module that handles running the MemGPT conversational agent system from the command line. It initializes the agent, processes user input and runs the conversation loop.

Critical Functions:

- `main()`: Parses command line arguments and initializes the MemGPT agent.
- `run_agent_loop()`: Runs the main conversation loop, passing user input to the agent and printing responses.

Key Variables:

- `memgpt_agent`: The MemGPT Agent instance that handles the conversation.
- `user_input`: Stores the latest user input string.

- ``skip_next_user_input``: Flag to skip requesting next user input.
- ``user_message``: Packaged user message dict to pass to agent.
- ``cfg``: The MemGPT Config object with parameters.

****Interdependencies**:**

- Depends on ``memgpt.agent``, ``memgpt.system``, ``memgpt.interface`` and other MemGPT modules to initialize agent, process user input/output.
- Interacts with ``StorageConnector`` to attach data sources.
- Uses ``questionary`` for CLI interactions.

****Core vs Auxiliary Operations**:**

- Core: ``main()``, ``run_agent_loop()``
- Auxiliary: argument parsing, CLI interactions, attaching data sources.

****Operational Sequence**:**

1. Parse arguments and initialize MemGPT agent and config.
2. Print welcome message.
3. Enter input loop:
 - Get user input.
 - Handle CLI commands (`/exit`, `/load` etc).
 - Pass non-command input to agent.
 - Print agent response.
4. Exit when user enters `/exit`.

****Performance Aspects**:**

- Uses ``rich`` status bar to show "Thinking..." when agent is processing to avoid blocking.

- Handles exceptions during `agent.step()` to avoid crashes.

****Reusability**:**

- `main()` and `run_agent_loop()` could be imported and reused by other modules to run the CLI conversation loop.
- CLI argument parsing logic could be reused/imported separately.

****Usage**:** This module is intended to be run as a CLI program to start a MemGPT conversational agent session:

...

python main.py

...

****Assumptions**:**

- User will provide inputs via CLI when prompted.
- `memgpt.agent` and other modules are available to import.
- Required packages like `questionary` are installed.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-38.svg)

Module: main.py

Here is the analysis based on the provided code snippet:

- ****Module Name**:** The module's name is `main.py`.

- ****Primary Objectives**:** The primary purpose of this module is to run the application from the `memgpt.main` module.

- ****Critical Functions**:** The critical function in this module is `app()`. This function is responsible for initializing and running the

application.

- **Key Variables**: There are no explicit variables in this brief code snippet. However, implicit variables are likely to be present within the ``app()`` function in the ``memgpt.main`` module.
- **Interdependencies**: This module is dependent on the ``memgpt.main`` module, specifically the ``app`` function within that module.
- **Core vs. Auxiliary Operations**: The core operation in this module is running the ``app()`` function. There are no auxiliary operations in this code snippet.
- **Operational Sequence**: The operational sequence is straightforward - the ``app()`` function from the ``memgpt.main`` module is called and executed.
- **Performance Aspects**: Performance considerations are not evident from this code snippet. They would be dependent on what is inside the ``app()`` function from the ``memgpt.main`` module.
- **Reusability**: The code snippet is quite reusable, as it simply calls the ``app()`` function from the ``memgpt.main`` module. As long as the ``app()`` function is designed to be reusable, this code snippet will also be reusable.
- **Usage**: This module is used to initialize and run the application by calling the ``app()`` function from the ``memgpt.main`` module.
- **Assumptions**: The main assumption here is that the ``memgpt.main`` module and the ``app()`` function within it exist and function as expected. Furthermore, it assumes that the ``app()`` function does not require any arguments.

Please note that this analysis might not be fully accurate or complete due to the limited context and code snippet provided. For a more comprehensive analysis, the full code of the ``memgpt.main`` module and its ``app()`` function would be needed.

Flow Diagram [via mermaid]

Module: memgpt_agent.py

- **Module Name**: memgpt_agent.py

- **Primary Objectives**: This module defines the MemGPTAgent class and its associated methods. It is designed to create a GPT-based agent that can interact in a conversational manner, load and attach data, and handle various types of user messages.

- **Critical Functions**:

- `create_memgpt_autogen_agent_from_config`: This function creates an AutoGen agent from a given configuration.

- `create_autogen_memgpt_agent`: This function creates an AutoGen MemGPT agent with specified parameters.

- `load`: This function loads data based on given type.

- `attach`: This function attaches new data to the agent.

- `load_and_attach`: This function loads and attaches data to the agent.

- `_generate_reply_for_user_message`: This function generates a reply for a user message.

- `pretty_concat`: This function concatenates all of MemGPT's steps into one and returns as a single message.

- **Key Variables**:

- `name`: The name of the agent.

- `system_message`: A system message to initialize the agent.

- `is_termination_msg`: A function to determine if a message should terminate the conversation.

- `max_consecutive_auto_reply`: The maximum number of consecutive automatic replies.

- `human_input_mode`: The mode of human input.

- `function_map`: A map of functions.

- `code_execution_config`: The configuration for code execution.

- `llm_config`: The configuration for the language model.

- ``default_auto_reply``: The default automatic reply.
- ``interface_kwargs``: Arguments for the interface.
- **Interdependencies**: This module interacts with several other modules such as ``autogen.agentchat``, ``memgpt.agent``, ``memgpt.autogen.interface``, ``memgpt.persistence_manager``, ``memgpt.system``, ``memgpt.constants``, ``memgpt.presets.presets``, ``memgpt.personas``, ``memgpt.humans``, ``memgpt.config``, ``memgpt.cli.cli``, ``memgpt.cli.cli_load``, and ``memgpt.connectors.storage``.
- **Core vs. Auxiliary Operations**: The core operations are the creation and interaction of the MemGPT agent, including loading and attaching data, and generating replies for user messages. Auxiliary operations include formatting other agent messages, finding the last user message, finding new messages, and pretty concatenating messages.
- **Operational Sequence**: The module first creates an agent with a given configuration. Then, it loads and attaches data to the agent. After that, it generates replies for user messages and formats the messages.
- **Performance Aspects**: The module uses a GPT model, which can be computationally intensive. It also handles data loading and attachment, which might be IO-bound.
- **Reusability**: The module is highly reusable. It can be used to create various types of conversational agents with different configurations.
- **Usage**: This module is used to create a conversational agent that can interact with users, load and attach data, and handle various types of user messages.
- **Assumptions**: The module assumes that the data to be loaded and attached is available and in the correct format. It also assumes that the GPT model is available and properly configured.

Flow Diagram [via mermaid]

![[diagram]](./High_Level_Doc-40.svg)

Module: memory.py

Here is a comprehensive analysis of the memory.py module:

Module Name: memory.py

Primary Objectives: Provides implementations for the core memory, archival memory, and recall memory components of an AI assistant agent. Enables editing, querying, and persistence of memories.

Critical Functions:

- CoreMemory: Manages the core persona and human memories. Allows editing with character limits.
- ArchivalMemory (interface): Defines interface for archival memories.
- DummyArchivalMemory: Simple in-memory archival memory with text search.
- DummyArchivalMemoryWithEmbeddings: Adds embedding based search to dummy archival.
- DummyArchivalMemoryWithFaiss: Uses Faiss for fast nearest neighbors search.
- RecallMemory (interface): Defines interface for recall memories.
- DummyRecallMemory: Simple in-memory recall memory with text and date search.
- DummyRecallMemoryWithEmbeddings: Adds embedding based search.
- LocalArchivalMemory: Archival memory using Llama Index for search.
- EmbeddingArchivalMemory: Archival memory using custom storage and embeddings.

Key Variables:

- self._archive: Holds documents in dummy archival memories.
- self._message_logs: Holds message logs in dummy recall memories.
- self.index: Llama Index object for search in LocalArchivalMemory.
- self.storage: Custom storage connector in EmbeddingArchivalMemory.

****Interdependencies**:**

- Integrates with other system components like agent config, persistence manager, embeddings module.
- Relies on external libraries like Llama Index, Faiss, Storage Connectors.

****Core vs Auxiliary Operations**:**

- Core operations involve managing and editing the memories, inserting documents, and querying.
- Auxiliary operations are things like date validation, embedding management.

****Operational Sequence**:**

1. Memories initialized with config parameters and optional existing data.
2. Core memory edited via wrapper methods.
3. New info inserted into archival memories.
4. Queries executed on archival and recall memories.
5. Results returned.

****Performance Aspects**:**

- Llama Index and Faiss provide optimized search performance.
- Caching embeddings and search results avoids repeat expensive computations.
- Chunking strings for embedding improves efficiency.

****Reusability**:**

- Interfaces allow swapping underlying implementation.
- Config driven design allows reuse across agents.

****Usage**:**

- Used by agent during conversations to manage memory.
- Persistence manager handles loading and saving memory state.

****Assumptions**:**

- Agent config and parameters are provided.
- External libs like Llama Index are installed.
- Appropriate storage backends exist if configured.

In summary, the memory module provides key capabilities for an AI agent to manage both short-term and long-term memories in a performant and reusable manner. The interfaces and config driven design allow flexibility in the underlying implementations.

Flow Diagram [via mermaid]

![[diagram]](/High_Level_Doc-41.svg)

Module: openai_parallel_request_processor.py

- ****Module Name**:** openai_parallel_request_processor.py

- ****Primary Objectives**:**

This module is designed to process a large number of API requests in parallel while staying under the rate limits set by OpenAI. It provides a way to efficiently handle a high volume of requests without exceeding the rate limits and without causing the system to run out of memory.

- ****Critical Functions**:**

The main function, `process_api_requests_from_file()`, reads API requests from a file, processes them in parallel, and saves the results. The `APIRequest` class represents an API request and contains a method, `call_api()`, to make an API call and save the results. The `StatusTracker` class stores metadata about the script's progress. The `append_to_jsonl()` function appends a JSON payload to the end of a JSONL file.

- ****Key Variables****:

The module uses several key variables such as ``requests_filepath``, ``save_filepath``, ``request_url``, ``api_key``, ``max_requests_per_minute``, ``max_tokens_per_minute``, ``token_encoding_name``, ``max_attempts``, and ``logging_level``.

- ****Interdependencies****:

This module relies on several Python libraries including ``aiohttp`` for making API calls concurrently, ``argparse`` for running the script from the command line, ``asyncio`` for running API calls concurrently, ``json`` for saving results to a JSONL file, ``logging`` for logging rate limit warnings and other messages, ``os`` for reading the API key, ``re`` for matching the endpoint from the request URL, ``tiktoken`` for counting tokens, and ``time`` for sleeping after a rate limit is hit.

- ****Core vs. Auxiliary Operations****:

The core operation of this module is to process API requests in parallel while staying under the rate limits. Auxiliary operations include reading API requests from a file, saving results to a file, logging rate limit warnings and other messages, and counting tokens.

- ****Operational Sequence****:

The script first initializes variables and opens the file containing the API requests. It then enters a main loop where it updates the available capacity, gets the next request, checks if there's enough capacity to call the API, and calls the API if there is enough capacity. If a rate limit error is hit, the script pauses to cool down. The loop breaks when no tasks remain.

- ****Performance Aspects****:

The script is designed to maximize throughput while staying under rate limits. It makes requests concurrently to maximize throughput and throttles request and token usage to stay under rate limits. It also retries failed requests to avoid missing data.

- ****Reusability****:

The module is highly reusable as it is designed to process any number of API requests in parallel. It can be used with different API endpoints, different rate limits, and different token encodings. It can also be used with different logging levels to control the amount of

logging.

- **Usage**:

The module is designed to be used from the command line. It takes several command line arguments including the path to the file containing the requests to be processed, the path to the file where the results will be saved, the URL of the API endpoint to call, the API key to use, the target number of requests to make per minute, the target number of tokens to use per minute, the name of the token encoding used, the number of times to retry a failed request before giving up, and the level of logging to use.

- **Assumptions**:

The script assumes that the API requests are stored in a JSONL file and that each line of the file is a JSON object with API parameters and an optional metadata field. It also assumes that the API key is stored in an environment variable if it is not provided as a command line argument.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-42.svg)

Module: openai_tools.py

- **Module Name**: openai_tools.py

- **Primary Objectives**: This module aims to interact with OpenAI's API and handle errors, retries, and configurations for different environments (Azure, OpenAI, local). It includes functions for creating chat completions and embeddings, and for configuring the API settings.

- **Critical Functions**:

- `retry_with_exponential_backoff`: Retries a function with exponential backoff in case of specified errors.
- `completions_with_backoff`: Handles chat completions with backoff for different environments.
- `chat_completion_with_backoff`: Configures the API settings and handles chat completions with backoff for different environments.

- ``create_embedding_with_backoff``: Handles the creation of embeddings with backoff.
- ``get_embedding_with_backoff``: Retrieves embeddings with backoff.
- ``using_azure``: Checks if Azure environment variables are set.
- ``configure_azure_support``: Configures OpenAI's API for Azure support.
- ``check_azure_embeddings``: Checks if Azure environment variables for embeddings are set.

- **Key Variables**:

- ``HOST``: The base URL of the OpenAI API.
- ``HOST_TYPE``: The type of backend used.
- ``openai.api_base``: The base URL of the OpenAI API.
- ``azure_openai_key, azure_openai_endpoint, azure_openai_version``: Azure OpenAI environment variables.
- ``kwargs``: Keyword arguments passed to various functions.
- ``MODEL_TO_AZURE_ENGINE``: Dictionary mapping model names to Azure engine names.

- **Interdependencies**: This module interacts with OpenAI's API and potentially with Azure's API, depending on the environment variables set. It also imports and uses functions from other modules such as ``memgpt.local_llm.chat_completion_proxy``, ``memgpt.utils``, and ``memgpt.config``.

- **Core vs. Auxiliary Operations**: Core operations include interacting with the OpenAI API and handling retries and errors. Auxiliary operations include configuring the API for different environments and checking environment variables.

- **Operational Sequence**: The module first checks the environment variables and configures the API accordingly. Then, it performs operations (chat completions, embeddings) with exponential backoff in case of errors.

- **Performance Aspects**: The module uses exponential backoff to handle rate limit errors, improving its robustness and reliability.

However, the maximum number of retries is capped, which can limit the module's persistence in case of persistent errors.

- **Reusability**: The module's functions are general enough to be reused in different contexts where interaction with OpenAI's API is required. The module can handle different environments (Azure, OpenAI, local), increasing its reusability.

- **Usage**: This module is used whenever interaction with OpenAI's API is required, such as when creating chat completions or embeddings.

- **Assumptions**: The module assumes that the necessary environment variables are set. It also assumes that the OpenAI API will raise a `RateLimitError` when the rate limit is exceeded, and retries the operation in this case.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-43.svg)

Module: persistence_manager.py

- **Module Name**: persistence_manager.py

- **Primary Objectives**: This module's primary purpose is to manage the persistence of memory and messages for an AI agent. It provides facilities for saving and loading the state of the agent, as well as manipulating the agent's memory and messages.

- **Critical Functions**:

- `trim_messages`: Trims the messages to a specified number.
- `prepend_to_messages`: Adds messages to the beginning of the list of messages.
- `append_to_messages`: Adds messages to the end of the list of messages.
- `swap_system_message`: Replaces the system message with a new one.
- `update_memory`: Updates the agent's memory with a new one.
- `save`: Saves the current state to a file.
- `load`: Loads the state from a file.
- `init`: Initializes the state manager with an agent object.

- ****Key Variables****:

- ``self.memory``: The agent's memory.
- ``self.messages``: The list of messages.
- ``self.all_messages``: The list of all messages.
- ``self.recall_memory``: The recall memory database.
- ``self.archival_memory_db``: The archival memory database.
- ``self.archival_memory``: The archival memory.

- ****Interdependencies****: This module interacts with the following components:

- ``abc``: For abstract base classes.
- ``os``: For interacting with the operating system.
- ``pickle``: For serializing and deserializing Python object structures.
- ``AgentConfig``: For agent configuration.
- Various memory classes like ``DummyRecallMemory``, ``DummyArchivalMemory``, etc.
- ``get_local_time`` and ``printd`` from ``.utils``.

- ****Core vs. Auxiliary Operations****: The core operations of this module include initializing the state manager, updating the memory, and manipulating messages. Auxiliary operations include saving and loading the state.

- ****Operational Sequence****: The typical operational sequence involves initializing the state manager with an agent, manipulating the agent's memory and messages as needed, and saving the state to a file.

- ****Performance Aspects****: The performance of this module largely depends on the efficiency of the memory management and the speed of the file I/O operations.

- **Reusability**: This module is highly reusable. It provides a generic framework for managing the state of an AI agent, and can be easily adapted for different types of agents and memory structures.

- **Usage**: This module is used in the context of an AI agent that needs to maintain a persistent state across multiple interactions. The state manager is initialized with the agent, and then used to manipulate the agent's memory and messages.

- **Assumptions**: The module assumes that the memory and messages of the agent can be serialized and deserialized using `pickle`. It also assumes that the memory and messages are structured in a way that allows them to be manipulated as lists.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-44.svg)

Module: personas.py

- **Module Name**: The module is named "personas.py".

- **Primary Objectives**: This module's primary purpose is to retrieve persona text from a specified file. If no file path is provided, it will look for the file in the "examples" directory.

- **Critical Functions**: The main function in this module is `get_persona_text(key=DEFAULT, dir=None)`. This function fetches the content of a text file based on the provided key. If the key does not have a ".txt" extension, it appends it. If no directory is specified, the function looks for the file in the "examples" directory. If the file does not exist, it raises a `FileNotFoundError`.

- **Key Variables**: The critical variables in this module are `key`, `dir`, `filename`, and `file_path`. The `key` is the name of the text file, `dir` is the directory where the function looks for the file, `filename` is the full name of the file, and `file_path` is the full path to the file.

- **Interdependencies**: This module depends on the `os` module for interacting with the operating system's file system.

- **Core vs. Auxiliary Operations**: The core operation is the ``get_persona_text()`` function. There are no auxiliary operations in this module.

- **Operational Sequence**: The function first checks if a directory is provided. If not, it sets the directory to the "examples" folder. It then constructs the filename and the full path to the file. Finally, it tries to open the file and return its content. If the file does not exist, it raises an error.

- **Performance Aspects**: The module's performance depends on the efficiency of the file system operations. Since it involves disk I/O operations, it might be slower than in-memory operations.

- **Reusability**: The ``get_persona_text()`` function is highly reusable. It can be used to read any text file in any directory, making it a versatile function for file reading operations.

- **Usage**: This module is used when there is a need to fetch persona text from a file. The user can specify the file's name and optionally its directory.

- **Assumptions**: The function assumes that the file exists in the specified directory. If the file does not exist, it will raise a ``FileNotFoundError``. It also assumes that the file's content can be read as text.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-45.svg)

Module: presets.py

- **Module Name**: presets.py

- **Primary Objectives**: This module is used to manage presets, which are combinations of SYSTEM and FUNCTION prompts. It's primarily used for loading and validating presets, and for creating an Agent object with the chosen preset.

- **Critical Functions**:

- ``use_preset``: This function takes a preset name, agent configuration, model, persona, human, interface, and persistence manager

as arguments. It validates the preset, filters the function set based on what the preset requested, and creates an Agent with the specified parameters.

- **Key Variables**:

- ``DEFAULT_PRESET``: This variable holds the default preset name, "memgpt_chat".

- ``available_presets``: This variable holds all available presets, loaded via the ``load_all_presets`` function.

- ``preset_options``: This variable holds the keys of all available presets.

- **Interdependencies**: This module interacts with the ``utils``, ``prompts``, ``functions``, and ``agent`` modules from the same package. It also uses the ``printd`` function from the ``utils`` module for debugging purposes.

- **Core vs. Auxiliary Operations**: The core operation of this module is the ``use_preset`` function, which is used to create an Agent with a specified preset. The loading and validation of presets are auxiliary operations.

- **Operational Sequence**: The ``use_preset`` function first loads all available functions and presets. It then validates the specified preset and filters the function set based on what the preset requested. Finally, it creates and returns an Agent with the specified parameters.

- **Performance Aspects**: This module is efficient as it only loads and processes the necessary functions based on the specified preset. However, the performance may be affected if the number of available functions and presets is large.

- **Reusability**: This module is highly reusable as it provides a function to create an Agent with any valid preset. The presets can be easily extended or modified for different use cases.

- **Usage**: This module is used whenever an Agent needs to be created with a specific preset. It's typically used in the setup phase of a conversational AI application.

- **Assumptions**: This module assumes that all presets are in YAML format and that all specified functions in a preset are available in the function library.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-46.svg)

Module: schema_generator.py

- **Module Name**: The module is named ``schema_generator.py``.

- **Primary Objectives**: This module is designed to generate a JSON schema for a given Python function. It uses the function's signature and docstring to create a detailed schema, including the function's name, description, parameters, and their types.
- **Critical Functions**: The main functions in this module are `is_optional`, `optional_length`, `type_to_json_schema_type`, and `generate_schema`. The `generate_schema` function is the core function that generates the JSON schema for a given function.
- **Key Variables**: Some key variables include `NO_HEARTBEAT_FUNCTIONS`, `FUNCTION_PARAM_NAME_REQ_HEARTBEAT`, `FUNCTION_PARAM_TYPE_REQ_HEARTBEAT`, and `FUNCTION_PARAM_DESCRIPTION_REQ_HEARTBEAT`. These variables are related to the heartbeat functionality in the system.
- **Interdependencies**: This module interacts with the `inspect`, `typing`, `docstring_parser`, and `memgpt.constants` modules.
- **Core vs. Auxiliary Operations**: The core operation of this module is to generate a JSON schema for a given function. Auxiliary operations include checking if a type is optional, getting the length of an optional type, and mapping a Python type to a JSON schema type.
- **Operational Sequence**: The `generate_schema` function first gets the signature of the function and parses the docstring. It then prepares the schema dictionary and iterates over the function's parameters, adding their details to the schema. If the function is not in `NO_HEARTBEAT_FUNCTIONS`, it also adds a heartbeat parameter to the schema.
- **Performance Aspects**: This module is designed to be efficient by directly mapping Python types to JSON schema types. However, it may raise errors if a function's parameters lack type annotations or descriptions in the docstring.
- **Reusability**: This module is highly reusable. It can generate a JSON schema for any Python function that has a properly formatted docstring.

- **Usage**: To use this module, import it and call the `generate_schema` function with the function you want to generate a schema for as the argument.

- **Assumptions**: This module assumes that all functions have properly formatted docstrings with parameter descriptions. It also assumes that all parameters have type annotations.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-47.svg)

Module: scrape_docs.py

- **Module Name**: scrape_docs.py

- **Primary Objectives**: The purpose of this module is to extract text from .txt files in a specified directory and its subdirectories, and save the extracted text into a JSON line file. It is particularly designed for processing Sphinx-generated documentation.

- **Critical Functions**:

- `extract_text_from_sphinx_txt(file_path)`: This function opens a .txt file, reads it line by line, tokenizes the text, and splits it into passages of a certain length (800 tokens by default). It returns a list of dictionaries, each containing the title of the document, the text of a passage, and the number of tokens in the passage.

- `os.walk(docs_dir)`: This function is used to iterate over all files in the specified directory and its subdirectories.

- `json.dumps(p)`: This function is used to convert the dictionaries into JSON formatted strings.

- **Key Variables**:

- `docs_dir`: The directory where the documentation resides.

- `encoding`: The encoding used for tokenization, defined for the GPT-4 model.

- `PASSAGE_TOKEN_LEN`: The maximum length of a passage in tokens.

- `passages`: A list that stores the passages extracted from all .txt files.

- `total_files`: A counter for the total number of .txt files processed.

- **Interdependencies**: This module uses the ``os``, ``re``, ``tiktoken``, and ``json`` libraries.

- **Core vs. Auxiliary Operations**: The core operation of this module is the extraction of text from `.txt` files and its tokenization into passages. The auxiliary operations include walking through the directory and its subdirectories, counting the total number of `.txt` files processed, and saving the passages into a JSON line file.

- **Operational Sequence**: The module first defines some variables and the ``extract_text_from_sphinx_txt()`` function. Then, it iterates over all `.txt` files in the specified directory and its subdirectories, extracting the text from each file and appending the resulting passages to the ``passages`` list. Finally, it writes the passages into a JSON line file.

- **Performance Aspects**: The module is designed to handle large amounts of text and to tokenize it efficiently. However, the performance may be affected by the size and number of `.txt` files, as well as the capacity of the system where it is running.

- **Reusability**: The module is quite adaptable for reuse. The ``extract_text_from_sphinx_txt()`` function can be used with any `.txt` file, not just Sphinx-generated documentation. Also, the directory, the encoding, and the maximum passage length can be easily changed to fit different needs.

- **Usage**: This module is used for processing large amounts of text, particularly documentation generated by Sphinx. It can be run as a standalone Python script.

- **Assumptions**: The module assumes that all `.txt` files in the specified directory and its subdirectories are valid and can be opened and read without issues. It also assumes that the text in the `.txt` files can be tokenized using the specified encoding.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-48.svg)

Module: settings.py

- **Module Name**: The module is named as "settings.py".
- **Primary Objectives**: The primary purpose of this module is to define some constants and settings for a language model. These settings include stop tokens, maximum number of tokens the model can generate, whether to use a local model or not, and whether the model should be streamed.
- **Critical Functions**: This module doesn't seem to have any functions or methods. It is primarily used for setting up configurations.
- **Key Variables**: The key variables in this module are `SIMPLE`, which is a dictionary containing various settings for the language model. The settings include "stop" (a list of stop tokens), "max_tokens" (the maximum number of tokens the model can generate, which is commented out), "stream" (a boolean indicating whether the model should be streamed), and "model" (which defines the model to use).
- **Interdependencies**: This module is dependent on the `constants` module from which it imports `LLM_MAX_TOKENS`.
- **Core vs. Auxiliary Operations**: The core operation of this module is to provide a configuration for the language model. There don't appear to be any auxiliary operations.
- **Operational Sequence**: As it is a settings module, it doesn't have an operational sequence. It is likely imported by other modules that use these settings.
- **Performance Aspects**: Performance considerations are not directly addressed in this module. However, the "max_tokens" setting could potentially impact the performance of the language model.
- **Reusability**: This module is highly reusable. It can be imported by any module that requires these settings. The settings can also be easily modified for different use cases.

- **Usage**: This module is used by importing it into another module and using the settings defined in the `SIMPLE` dictionary.

- **Assumptions**: The module assumes that the language model has a context length of 8000 tokens, as indicated by the commented out "max_tokens" setting. It also assumes that the `LLM_MAX_TOKENS` constant is defined in the `constants` module.

Flow Diagram [via mermaid]

![[diagram]](./High_Level_Doc-49.svg)

Module: settings.py

- **Module Name**: The module is named as `settings.py`.

- **Primary Objectives**: The primary purpose of this module is to define certain settings or configurations that are used throughout the program. These settings include a list of stop words and phrases.

- **Critical Functions**: This module does not include any functions or methods. It primarily serves as a configuration file.

- **Key Variables**: The key variable in this module is `SIMPLE`, a dictionary that contains a list of stop words and phrases. These words/phrases are used to determine when certain operations in the program should stop.

- **Interdependencies**: This module imports `LLM_MAX_TOKENS` from a module named `constants`. It suggests that this module interacts with the `constants` module.

- **Core vs. Auxiliary Operations**: As a settings file, this module doesn't perform any operations. It only provides configurations that are used by other modules.

- **Operational Sequence**: There is no distinct operational flow within this module as it only contains a configuration setting.

- **Performance Aspects**: The performance of this module depends on how efficiently the settings it provides are used by other modules. The list of stop words/phrases could potentially be optimized for better performance.
- **Reusability**: The ``settings.py`` module is highly reusable. It can be imported into any other module that requires its configurations. The stop words/phrases list can be easily modified to adapt to different use cases.
- **Usage**: This module is used by importing it into other modules. The ``SIMPLE`` dictionary it provides can then be used to access the list of stop words/phrases.
- **Assumptions**: The module assumes that the ``constants`` module, from which it imports ``LLM_MAX_TOKENS``, is available. It also assumes that the stop words/phrases listed in the ``SIMPLE`` dictionary are sufficient for the program's needs.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-50.svg)

Module: settings.py

- **Module Name**: The module is named ``settings.py``.
- **Primary Objectives**: The main purpose of this module is to configure the settings for a particular application. It includes the stop sequence and maximum length of the context for the application.
- **Critical Functions**: This module does not contain any specific functions or methods. It mainly consists of a dictionary named ``SIMPLE`` that holds configuration settings.
- **Key Variables**:
 - ``stop_sequence``: This is a list of strings that signal the end of a sequence.
 - ``max_length``: This defines the maximum length of the context.

- **Interdependencies**: This module imports `LLM_MAX_TOKENS` from a module named `constants`.
- **Core vs. Auxiliary Operations**: The core operation of this module is to provide a configuration dictionary. There are no auxiliary operations in this module.
- **Operational Sequence**: There's no distinct flow in this module as it's a settings file and doesn't execute any operations.
- **Performance Aspects**: The performance of the module depends on how the `SIMPLE` dictionary is used in other parts of the application. The `max_length` parameter could potentially affect the performance, as larger contexts may require more processing power.
- **Reusability**: The module is highly reusable. It can be imported into any other Python file that requires these settings.
- **Usage**: This module is used to provide configuration settings to other parts of the application that import it.
- **Assumptions**: The module assumes that the `LLM_MAX_TOKENS` constant is defined in the `constants` module. It also assumes that the `stop_sequence` and `max_length` parameters are sufficient for configuring the application.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-51.svg)

Module: settings.py

- **Module Name**: The module is named as `settings.py`.
- **Primary Objectives**: The main purpose of this module is to define various settings for a program, specifically related to processing and handling of text data.
- **Critical Functions**: This module does not contain any explicit functions or methods. However, it does define a dictionary

`SIMPLE` which seems to be a configuration or settings dictionary.

- **Key Variables**: The key variable in this module is `SIMPLE`. It appears to hold stopping strings that may be used to identify different types of inputs or outputs in a conversation, such as user input, assistant output, function returns, and some special tags.
- **Interdependencies**: This module imports `LLM_MAX_TOKENS` from a module named `constants`. This suggests that it has a dependency on the `constants` module.
- **Core vs. Auxiliary Operations**: As there are no functions or methods defined in this module, it is not possible to differentiate between core and auxiliary operations. However, the setting of the `SIMPLE` dictionary can be considered as the core operation.
- **Operational Sequence**: The `SIMPLE` dictionary is defined once and can be used throughout the program wherever required. There doesn't seem to be a distinct flow in this module.
- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the commented settings related to `max_tokens` and `truncation_length` might be related to performance considerations in terms of handling and processing large amounts of text data.
- **Reusability**: This module seems to be highly reusable. The `SIMPLE` dictionary can be imported into any other module where these settings are required.
- **Usage**: This module is used to define settings related to text data processing and handling. The `SIMPLE` dictionary can be imported into other modules and its values can be used as per the requirements.
- **Assumptions**: The module assumes that the stopping strings defined in the `SIMPLE` dictionary are sufficient to handle all the required scenarios. Also, it assumes that `LLM_MAX_TOKENS` is defined in the `constants` module.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-52.svg)

Module: settings.py

- **Module Name**: This module is named `settings.py`.

- **Primary Objectives**: The main purpose of this module is to configure the settings for a specific application or script. It particularly sets up the options for the stop sequences, streaming, system prompt, template, and context.

- **Critical Functions**: This module doesn't contain any functions or methods, but it does define a dictionary `SIMPLE` that contains the settings.

- **Key Variables**: The key variables in this module include `SIMPLE`, which is a dictionary containing the configuration settings. The elements of this dictionary such as `options`, `stream`, `system`, `template`, and `context` are also key variables.

- **Interdependencies**: This module imports `LLM_MAX_TOKENS` from a module named `constants`. It does not appear to interact with any other system components within the provided code.

- **Core vs. Auxiliary Operations**: The core operation of this module is the definition of the `SIMPLE` dictionary. There are no auxiliary operations in this module.

- **Operational Sequence**: This module does not have a distinct operational sequence as it only defines a dictionary.

- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the configuration settings defined in this module may impact the performance of the application or script it is used in.

- **Reusability**: This module is highly reusable. The `SIMPLE` dictionary can be imported into other scripts or modules to apply the

same configuration settings.

- **Usage**: This module is used by importing it into other scripts or modules. The `SIMPLE` dictionary can then be used to access the configuration settings.

- **Assumptions**: The module assumes that the `constants` module and the `LLM_MAX_TOKENS` variable exist and can be imported. It also assumes that the stop sequences and other elements of the `SIMPLE` dictionary are valid and correctly formatted.

Flow Diagram [via mermaid]

![[diagram]](/High_Level_Doc-53.svg)

Module: `simple_summary_wrapper.py`

- **Module Name**: `simple_summary_wrapper.py`

- **Primary Objectives**: This module is designed to generate summaries from a given set of conversations. It's a wrapper class that simplifies the process of summarizing conversations.

- **Critical Functions**:

- `__init__`: Initializes the class with certain parameters.

- `chat_completion_to_prompt`: Converts chat completion to a prompt format.

- `create_function_call`: Converts ChatCompletion to Airoboros style function trace (in prompt).

- `output_to_chat_completion_response`: Converts raw LLM output into a ChatCompletion style response.

- **Key Variables**: `simplify_json_content`, `include_assistant_prefix`, `include_section_separators` are the essential variables.

- **Interdependencies**: This module depends on the `LLMChatCompletionWrapper` from the `wrapper_base` module.

- **Core vs. Auxiliary Operations**: Core operations include the conversion of chat completion to a prompt and the conversion of raw LLM output into a ChatCompletion style response. Auxiliary operations include the initialization of the class and the creation of function calls.

- **Operational Sequence**: The sequence begins with the initialization of the class, followed by the conversion of chat completion to a prompt. Then, function calls are created and finally, the raw LLM output is converted into a ChatCompletion style response.

- **Performance Aspects**: The module is designed to be efficient in summarizing conversations, but its performance may depend on

the complexity and length of the conversations.

- **Reusability**: The module is highly reusable as it can be used to summarize different types of conversations.
- **Usage**: This module is used to generate summaries from a given set of conversations.
- **Assumptions**: The module assumes that the conversations are provided in a specific format, and that functions are None when converting chat completion to a prompt.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-54.svg)

Module: storage.py

- **Module Name**: storage.py
- **Primary Objectives**: This module is designed to manage storage connectors, allowing for the storage and retrieval of passages of text and their associated embeddings. It provides abstract methods for creating, reading, updating, and deleting these passages, as well as querying them.
- **Critical Functions**:
 - `__init__`: Initializes the Passage class with text, embedding, doc_id, and passage_id.
 - `get_storage_connector`: Returns a storage connector based on the archival storage type specified in the MemGPTConfig.
 - `list_loaded_data`: Lists the data loaded from the specified storage type.
 - `get_all_paginated`: Abstract method to get all passages in a paginated manner.
 - `get_all`: Abstract method to get all passages up to a limit.
 - `get`: Abstract method to get a specific passage by id.
 - `insert`: Abstract method to insert a passage.
 - `insert_many`: Abstract method to insert multiple passages.
 - `query`: Abstract method to query for passages based on a string query and query vector.
 - `save`: Abstract method to save the state of the storage connector.
 - `size`: Abstract method to get the number of passages in storage.

- **Key Variables**:

- ``text``: The text of a passage.
- ``embedding``: The embedding associated with a passage.
- ``doc_id``: The id of the document from which the passage comes.
- ``passage_id``: The id of the passage.
- ``storage_type``: The type of storage being used, which can be local, postgres, or lancedb.

- **Interdependencies**: This module interacts with the `LocalStorageConnector`, `PostgresStorageConnector`, and `LanceDBConnector` modules, which are implementations of the abstract `StorageConnector` class. It also interacts with the `AgentConfig` and `MemGPTConfig` classes from the `memgpt.config` module.

- **Core vs. Auxiliary Operations**: The core operations of this module are the CRUD operations (create, read, update, delete) on passages. The auxiliary operations include listing loaded data and saving the state of the storage connector.

- **Operational Sequence**: When a storage connector is needed, the ``get_storage_connector`` method is called, which returns an instance of the appropriate storage connector class based on the `storage_type`. The returned instance can then be used to perform operations on the passages in storage.

- **Performance Aspects**: Performance considerations would depend on the specific storage connector being used. For example, a database connector might have performance considerations related to database connection and query execution times.

- **Reusability**: This module is highly reusable, as it defines a standard interface for storage connectors. By implementing the abstract methods of the `StorageConnector` class, new types of storage connectors can be easily added.

- **Usage**: This module is used whenever a storage connector is needed to perform operations on passages. The specific usage

would depend on the specific storage connector being used.

- **Assumptions**: The module assumes that the storage_type specified in the MemGPTConfig is one of "local", "postgres", or "lancedb". It also assumes that the appropriate storage connector classes are available for import.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-55.svg)

Module: system.py

- **Module Name**: system.py

- **Primary Objectives**: This module is designed to manage system messages, including initial boot messages, heartbeat messages, login events, user messages, function responses, message summaries, and token limit warnings. It also packages these messages with time and location data.

- **Critical Functions**:

- ``get_initial_boot_messages(version="startup")``: Returns initial boot messages based on the version specified.
- ``get_heartbeat(reason="Automated timer", include_location=False, location_name="San Francisco, CA, USA")``: Packages and returns a heartbeat message.
- ``get_login_event(last_login="Never (first login)", include_location=False, location_name="San Francisco, CA, USA")``: Packages and returns a login event message.
- ``package_user_message(user_message, time=None, include_location=False, location_name="San Francisco, CA, USA")``: Packages and returns a user message.
- ``package_function_response(was_success, response_string, timestamp=None)``: Packages and returns a function response message.
- ``package_summarize_message(summary, summary_length, hidden_message_count, total_message_count, timestamp=None)``: Packages and returns a message summary.
- ``package_summarize_message_no_summary(hidden_message_count, timestamp=None, message=None)``: Packages and returns a message summary without a summary.
- ``get_token_limit_warning()``: Packages and returns a token limit warning message.

- ****Key Variables****:

- ``version``: The version of initial boot messages.
- ``reason``: The reason for the heartbeat.
- ``include_location``: A flag indicating whether to include location data in the message.
- ``location_name``: The name of the location to include in the message.
- ``last_login``: The last login time.
- ``user_message``: The user message to package.
- ``was_success``: A flag indicating whether a function was successful.
- ``response_string``: The response string from a function.
- ``summary``: The summary of messages.
- ``summary_length``: The length of the summary.
- ``hidden_message_count``: The count of hidden messages.
- ``total_message_count``: The total count of messages.

- ****Interdependencies****: This module interacts with the ``utils`` module to get local time and the ``constants`` module to get constant values.

- ****Core vs. Auxiliary Operations****: The core operations of this module are the packaging and returning of various system messages.

The auxiliary operations include getting local time and constant values from other modules.

- ****Operational Sequence****: The functions in this module can be called independently as needed to package and return various types of system messages.

- ****Performance Aspects****: The performance of this module depends on the efficiency of JSON operations and the speed of retrieving local time and constant values.

- ****Reusability****: This module is highly reusable as it provides a standard way to package and return various types of system messages.

- ****Usage****: This module is used whenever a system message needs to be packaged and returned.

- ****Assumptions****: This module assumes that the ``utils`` and ``constants`` modules are available and functioning correctly. It also assumes that the necessary arguments will be provided when calling its functions.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-56.svg)

Module: test_cli.py

- **Module Name**: The module name is `test_cli.py`.

- **Primary Objectives**: The primary purpose of this module is to test the command line interface (CLI) operations of a program. It focuses on testing the configuration, saving, and loading functionalities.

- **Critical Functions**:

- `test_configure_memgpt()` : This function tests the configuration of memgpt.

- `test_save_load()` : This function tests the saving and loading functionality of the program.

- **Key Variables**:

- `child` : This is an instance of `pexpect.spawn` class. It is used to spawn and control child applications.

- `TIMEOUT` : This variable is used to set the timeout for the `expect` method of `child`.

- **Interdependencies**: This module interacts with the `pexpect` library to spawn child applications and control their input/output. It also uses the `constants` and `utils` modules from the same package.

- **Core vs. Auxiliary Operations**: The core operations of this module are the `test_configure_memgpt()` and `test_save_load()` functions. The auxiliary operations include the import statements and the `if __name__ == "__main__":` block which allows the module to be run as a script.

- **Operational Sequence**: The module first configures memgpt, then tests the save and load operations. If the module is run as a script, it executes `test_configure_memgpt()` and `test_save_load()` sequentially.

- **Performance Aspects**: Performance considerations include the timeout for the `expect`` method of `child``, which can affect the speed and efficiency of the tests.
- **Reusability**: The module is highly reusable. The test functions can be imported and used in other test suites or modules.
- **Usage**: This module is used for testing purposes. It can be run as a standalone script or imported into another module.
- **Assumptions**: The module assumes that the `memgpt`` program responds correctly to the input provided by the `child`` instance. It also assumes that the `memgpt`` program terminates cleanly after execution.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-57.svg)

Module: test_json_parsers.py

- **Module Name**: The module name is `test_json_parsers.py``.
- **Primary Objectives**: This module's purpose is to test the functionality of JSON parsers, particularly their ability to handle and fix broken JSON.
- **Critical Functions**: The main function in this module is `test_json_parsers()``. This function iterates through a list of test strings, each representing a different form of broken JSON. It attempts to parse each string with `json.loads()``, expects a failure, and then tries to repair the string with `json_parser.clean_json()``.
- **Key Variables**: The key variables in this module are `EXAMPLE_MISSING_CLOSING_BRACE``, `EXAMPLE_BAD_TOKEN_END``, `EXAMPLE_DOUBLE_JSON``, `EXAMPLE_HARD_LINE_FEEDS``, and `test_strings``. Each of these variables represents a different form of broken JSON that will be used to test the parsers.
- **Interdependencies**: This module interacts with the `json`` module from Python's standard library and `json_parser`` from

`memgpt.local_llm`.

- **Core vs. Auxiliary Operations**: The core operation is the testing of JSON parsers. Auxiliary operations include the creation of test strings and exception handling.

- **Operational Sequence**: The sequence is as follows: For each test string, the function tries to parse it with `json.loads()`. If an exception is thrown (as expected), it then tries to repair the string with `json_parser.clean_json()`. If this fails, an exception is raised.

- **Performance Aspects**: The performance of this module depends on the efficiency of the JSON parsers it tests, as well as the complexity of the test strings.

- **Reusability**: This module is highly reusable. It can be used to test any JSON parser's ability to handle and fix broken JSON, simply by replacing the test strings.

- **Usage**: This module is used for testing purposes. It is likely invoked during development or in a continuous integration pipeline to ensure that changes to the JSON parsers do not break their functionality.

- **Assumptions**: The module assumes that the JSON parsers should be able to fix any form of broken JSON. It also assumes that `json.loads()` will fail to parse the test strings.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-58.svg)

Module: test_load_archival.py

Here is a comprehensive analysis of the provided code module:

- **Module Name**: test_load_archival.py

- **Primary Objectives**: The purpose of this module is to test the loading and storage of data using different archival storage types such as "postgres", "lancedb", and "chroma".

- **Critical Functions**: The main methods/functions in this module are:

- `test_postgres()`: Tests the loading and storage of data using the "postgres" archival storage type.
- `test_lancedb()`: Tests the loading and storage of data using the "lancedb" archival storage type.
- `test_chroma()`: Tests the loading and storage of data using the "chroma" archival storage type.
- `test_load_directory()`: Tests the loading of a directory into an index.
- `test_load_webpage()`: Placeholder function for testing loading a webpage.
- `test_load_database()`: Tests the loading of a database into an index.

- **Key Variables**: The key variables used in this module are:

- `name`: Name of the dataset or index.
- `dataset`: Dataset object loaded from the "MemGPT/example_short_stories" dataset.
- `cache_dir`: Directory path for caching datasets.
- `config`: MemGPTConfig object for configuring the archival storage type.
- `engine`: SQLAlchemy engine object for connecting to a database.
- `metadata`: SQLAlchemy MetaData object for reflecting the database.
- `table_names`: List of table names in the reflected database.
- `query`: SQL query for retrieving data from a table.
- `df`: Pandas DataFrame object for storing data retrieved from the database.

- **Interdependencies**: This module depends on the following system components:

- `tempfile`: For temporary file operations.
- `asyncio`: For running asynchronous functions.
- `os`: For environment variable operations and file system operations.

- ``datasets``: For loading datasets from Hugging Face.
- ``memgpt``: The main library for MemGPT functionality.
- ``presets``: For using preset configurations.
- ``personas``: For accessing persona-related functions and data.
- ``humans``: For accessing human-related functions and data.
- ``persistence_manager``: For managing the state of the agent.
- ``chromadb``: For interacting with the "chroma" archival storage type.
- ``lancedb``: For interacting with the "lancedb" archival storage type.
- ``subprocess``: For executing subprocess commands.
- ``sys``: For accessing system-specific parameters and functions.
- ``sqlalchemy``: For working with databases.
- ``pandas``: For working with data in tabular form.

- **Core vs. Auxiliary Operations**: The core operations of this module include testing the loading and storage of data using different archival storage types, loading directories, and loading databases. The auxiliary operations include installing dependencies, setting environment variables, and printing debug information.

- **Operational Sequence**: The operational sequence of this module is as follows:

1. Install dependencies (``lancedb`` and ``chromadb``) if not already installed.
2. Set the ``MEMGPT_CONFIG_PATH`` environment variable to "test_config.cfg".
3. Test loading and storage of data using the "postgres" archival storage type.
4. Test loading and storage of data using the "lancedb" archival storage type.
5. Test loading and storage of data using the "chroma" archival storage type.
6. Test loading a directory into an index.
7. Test loading a database into an index.

- **Performance Aspects**: There are no specific performance aspects mentioned in the provided code module.
 - **Reusability**: This module can be reused to test the loading and storage of data using different archival storage types, loading directories, and loading databases. However, some parts of the code may need modification depending on the specific use case.
 - **Usage**: The module can be executed as a standalone script or imported as a module and used to test the functionality of the MemGPT library for loading and storing data.
 - **Assumptions**: Based on the code provided, the assumptions made are:
 - The necessary dependencies (`lancedb`, `chromadb`, etc.) are already installed.
 - The required dataset ("MemGPT/example_short_stories") is available for loading.
 - The necessary configuration files ("test_config.cfg") are present.
 - The database file ("test.db") exists for loading into the index.
- ## Flow Diagram [via mermaid]
-
- ## Module: test_questionary.py
- **Module Name**: The module name is `test_questionary.py`.
 - **Primary Objectives**: The purpose of this module is to test the legacy CLI (Command Line Interface) sequence of the `memgpt` program.
 - **Critical Functions**: The main function is `test_legacy_cli_sequence()`. This function tests the sequence of prompts and responses in the CLI of the `memgpt` program.
 - **Key Variables**: `TIMEOUT` is a key variable that sets the maximum wait time for responses. `child` is another key variable representing the spawned child process.

- **Interdependencies**: This module interacts with the ``memgpt`` program and the ``pexpect`` module for spawning child processes and expecting responses.
- **Core vs. Auxiliary Operations**: The core operation of this module is to test the ``memgpt`` program's CLI sequence. The auxiliary operations include setting up the child process, sending lines to the CLI, expecting responses, and checking the exit status of the child process.
- **Operational Sequence**: The sequence involves spawning a child process, sending commands to the CLI, expecting responses, and finally checking the exit status of the child process.
- **Performance Aspects**: The performance of this module depends on the responsiveness of the ``memgpt`` program's CLI and the timeout set for responses.
- **Reusability**: This module can be reused for testing different sequences of the ``memgpt`` program's CLI. However, it may need modifications depending on the specific sequence to be tested.
- **Usage**: This module is used for testing purposes, specifically for validating the correct functioning of the ``memgpt`` program's CLI sequence.
- **Assumptions**: The module assumes that the ``memgpt`` program's CLI will respond within the set timeout period. It also assumes that the ``memgpt`` program's CLI will react as expected to the sent commands.

Flow Diagram [via mermaid]

Module: test_schema_generator.py

- **Module Name**: The module name is ``test_schema_generator.py``.

- **Primary Objectives**: The primary purpose of this module is to generate and test JSON schemas for various functions. This includes checking whether the schema is correctly converted, handling missing types, and handling missing docstrings.

- **Critical Functions**:

- ``send_message``: Sends a message to the human user. It returns None as it does not produce a response.
- ``send_message_missing_types``: Similar to ``send_message``, but without type annotations, used for testing error handling.
- ``send_message_missing_docstring``: Similar to ``send_message``, but without a docstring, used for testing error handling.
- ``test_schema_generator``: Tests the ``generate_schema`` function with different scenarios.
- ``test_schema_generator_with_old_function_set``: Tests the ``generate_schema`` function with a set of base functions and extra functions.

- **Key Variables**:

- ``correct_schema``: The correct JSON schema for comparison.
 - ``generated_schema``: The JSON schema generated by the ``generate_schema`` function.
 - ``attr``: The attribute from the `base_functions` or `extras_functions` module.
 - ``real_schema``: The actual schema for comparison.
 - ``function_name``: The name of the function being tested.
- **Interdependencies**: This module interacts with the ``inspect``, ``base_functions``, ``extras_functions``, ``FUNCTIONS_CHAINING``, and ``generate_schema`` modules.

- **Core vs. Auxiliary Operations**: The core operations of this module are the functions ``test_schema_generator`` and ``test_schema_generator_with_old_function_set``, which perform the primary testing. The auxiliary operations include the ``send_message``, ``send_message_missing_types``, and ``send_message_missing_docstring`` functions, which are used for testing purposes.

- **Operational Sequence**: The module first defines several functions for sending messages and testing. It then defines two main test functions that generate schemas for the defined functions and compare them against the correct schemas.
- **Performance Aspects**: Performance considerations aren't explicitly mentioned in the module. However, the use of assertions for testing can halt execution as soon as a test fails, which can save time when debugging.
- **Reusability**: The module is designed for testing and can be reused to validate the schema generation of other functions. The `send_message` function can also be reused for sending messages to the user.
- **Usage**: This module is used for testing the `generate_schema` function to ensure it correctly generates JSON schemas for different functions.

- **Assumptions**: The module assumes that the `generate_schema` function will throw an error if types are missing or if the docstring is missing. It also assumes that the `generate_schema` function will correctly generate the schema for the tested functions.

Flow Diagram [via mermaid]

Module: test_storage.py

- **Module Name**: test_storage.py
- **Primary Objectives**: This module is designed to test the functionalities of storage connectors in the MemGPT application. It verifies the operations of two types of storage connectors: PostgresStorageConnector and LanceDBConnector.
- **Critical Functions**:
 - `test_postgres_openai()`: This function tests the PostgresStorageConnector with OpenAI.
 - `test_lancedb_openai()`: This function tests the LanceDBConnector with OpenAI.

- `test_postgres_local()`: This function tests the `PostgresStorageConnector` with local storage.

- `test_lancedb_local()`: This function tests the `LanceDBConnector` with local storage.

- **Key Variables**:

- `config`: It holds the configuration settings for the MemGPT application.

- `embed_model`: It is the embedding model used for text embedding.

- `passage`: It is the list of text passages to be inserted into the database.

- `db`: It is the instance of the storage connector.

- `query`: It is the query text used for testing the query functionality of the storage connector.

- `query_vec`: It is the vector representation of the query text.

- `res`: It is the result of the query operation.

- **Interdependencies**: This module interacts with several other modules in the MemGPT application including

`memgpt.connectors.storage`, `memgpt.connectors.db`, `memgpt.embeddings`, and `memgpt.config`.

- **Core vs. Auxiliary Operations**: Core operations include testing the functionalities of the storage connectors. Auxiliary operations include setting up the environment and configuration for the tests.

- **Operational Sequence**: The module first checks the environment variables for the required database URLs and OpenAI API keys. Then it configures the MemGPT application and initializes the storage connector. It inserts passages into the database, retrieves all entries, and performs a query operation. Finally, it verifies the results of the query operation.

- **Performance Aspects**: This module uses `pytest` for testing, which is a robust framework that allows for efficient and effective testing. Performance considerations would be related to the speed and accuracy of the storage connectors and the embedding model.

- **Reusability**: This module can be reused for testing different storage connectors in the MemGPT application. The test functions can be modified to test different functionalities of the storage connectors.

- **Usage**: This module is used for testing the functionalities of storage connectors in the MemGPT application.

- **Assumptions**: The module assumes that the required environment variables for the database URLs and OpenAI API keys are set. It also assumes that the required packages are installed and the necessary modules can be imported.

Flow Diagram [via mermaid]

Module: test_websocket_interface.py

- **Module Name**: The module is `test_websocket_interface.py`.

- **Primary Objectives**: The main purpose of this module is to test the WebSocket interface in the MemGPT system. It mocks the WebSocket connection, registers it, creates an agent, and tests the agent's interaction with the WebSocket interface.

- **Critical Functions**:

- `test_dummy()` : A placeholder test function that always passes.

- `test_websockets()` : The main test function that mocks a WebSocket connection and tests the interaction with the MemGPT agent.

- **Key Variables**:

- `mock_websocket` : A mocked WebSocket connection.

- `ws_interface` : The WebSocket interface to be tested.

- `persistence_manager` : An in-memory state manager for the agent.

- `memgpt_agent` : The MemGPT agent.

- `user_message` : A mocked user message.

- **Interdependencies**: The module interacts with other components of the MemGPT system, including the WebSocket interface, agent presets, personas, humans, and the system package.
 - **Core vs. Auxiliary Operations**: The core operation is the testing of the WebSocket interface (`test_websockets()`), while the auxiliary operation is the dummy test function (`test_dummy()`).
 - **Operational Sequence**: The operational sequence involves creating a mock WebSocket connection, registering it with the WebSocket interface, creating an agent, packaging a user message, making the agent step through the message, and finally closing the WebSocket interface.
 - **Performance Aspects**: The module uses asynchronous functions for testing, which can improve performance by allowing multiple operations to occur concurrently.
 - **Reusability**: The module is designed for testing purposes, so it can be reused whenever the WebSocket interface needs to be tested. However, the specific tests and mocks may need to be adjusted based on the specific testing requirements.
 - **Usage**: This module is used for testing the WebSocket interface in the MemGPT system.
 - **Assumptions**: The module assumes that the WebSocket interface and the MemGPT agent function correctly. It also assumes that the mocked user message and WebSocket connection accurately represent actual user messages and WebSocket connections.
- ## Flow Diagram [via mermaid]
-
- ## Module: test_websocket_server.py
- **Module Name**: The module name is `test_websocket_server.py`.

- **Primary Objectives**: This module is designed to test the functionality of a WebSocket server. It involves sending a test configuration to the server and a test message, then waiting for the server's response.

- **Critical Functions**:

- `test_dummy()`: A placeholder test function that simply asserts true.

- `test_websocket_server()`: The main test function that initiates a WebSocket server, sends a configuration and a message, receives responses, and then cancels the server task.

- **Key Variables**:

- `server`: An instance of the `WebSocketServer`.

- `server_task`: A task created for running the server.

- `test_config`: A dictionary that holds the configuration details for the test.

- `uri`: The connection string for the WebSocket.

- `websocket`: The WebSocket connection.

- `response`: The response received from the WebSocket server.

- **Interdependencies**: This module interacts with the `WebSocketServer` from the `memgpt.server.websocket_server` module, `AgentConfig` from the `memgpt.config` module, and `DEFAULT_PORT` from the `memgpt.server.constants` module. It also uses the `pytest`, `asyncio`, `json`, and `websockets` libraries.

- **Core vs. Auxiliary Operations**: The core operation is the testing of the WebSocket server using `test_websocket_server()`. The auxiliary operation is the `test_dummy()` function which serves as a placeholder test.

- **Operational Sequence**: The server is initiated, a test configuration is sent, a response is awaited, a message is sent, another response is awaited, and finally, the server task is cancelled.

- **Performance Aspects**: The server task is cancelled after the test to free up resources. Also, asynchronous operations are used to improve performance by allowing other operations to proceed without waiting.

- **Reusability**: The `test_websocket_server()` function can be reused for similar WebSocket server testing scenarios with different configurations and messages.

- **Usage**: This module is used for testing the WebSocket server's handling of configurations and messages. It can be run as part of a test suite to ensure the server behaves as expected.

- **Assumptions**: It is assumed that the server responds appropriately to the sent configuration and message. It is also assumed that the server is running on `localhost` at the `DEFAULT_PORT`.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-64.svg)

Module: utils.py

- **Module Name**: The name of the module is `utils.py`.

- **Primary Objectives**: The purpose of this module is to configure the memGPT local language model (LLM) using the `configure_memgpt_localllm()` function. It also contains a placeholder for future implementation of `configure_memgpt()` function with OpenAI and Azure support.

- **Critical Functions**:

- `configure_memgpt_localllm()`: This function launches the memGPT configuration process, sends the necessary inputs, and checks for successful completion.

- `configure_memgpt()`: This function is a wrapper for `configure_memgpt_localllm()`, with placeholders for enabling OpenAI and Azure.

- **Key Variables**:

- ``child``: This is a `pexpect.spawn` object that represents the spawned child application (memGPT configuration process).

- ``enable_openai``, ``enable_azure``: These are boolean flags to indicate whether to enable OpenAI and Azure support in the

``configure_memgpt()`` function.

- **Interdependencies**: This module depends on the ``pexpect`` library for spawning and interacting with child applications, and the

``constants`` module for the ``TIMEOUT`` constant.

- **Core vs. Auxiliary Operations**: The core operation is the ``configure_memgpt_localllm()`` function, which performs the actual

configuration process. The ``configure_memgpt()`` function serves as an auxiliary operation, providing a more flexible interface with

placeholders for future expansions.

- **Operational Sequence**: The ``configure_memgpt_localllm()`` function sequentially sends inputs to the memGPT configuration

process, waits for the expected prompts, and checks for successful completion.

- **Performance Aspects**: The performance of this module primarily depends on the responsiveness of the memGPT configuration

process.

- **Reusability**: The ``configure_memgpt_localllm()`` function can be reused to configure the memGPT LLM, and the

``configure_memgpt()`` function can be extended to support other LLM providers.

- **Usage**: This module is used for configuring the memGPT LLM. To use it, you would call ``configure_memgpt()`` with the

appropriate flags.

- **Assumptions**: This module assumes that the memGPT configuration process responds as expected to the sent inputs. It also

assumes that the configuration process will terminate and that the exit status will be 0 upon successful completion.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-65.svg)

Module: utils.py

- **Module Name**: The module is named `utils.py`.

- **Primary Objectives**: The main purpose of this module is to provide utility functions and classes that are used across different parts of the system. These include loading grammar files, counting tokens in a string, and getting available wrappers.

- **Critical Functions**:

- `DotDict`: This class extends the dictionary class to allow dot access on properties. It also includes methods for pickling.

- `load_grammar_file`: This function loads a grammar file from the "grammars" directory.

- `count_tokens`: This function counts the number of tokens in a string using a specified model.

- `get_available_wrappers`: This function returns a dictionary of available wrappers.

- **Key Variables**:

- `grammar_file`: The path to the grammar file.

- `grammar_str`: The string read from the grammar file.

- `encoding`: The encoding used for token counting.

- `s`: The string for which tokens are counted.

- **Interdependencies**: This module depends on the `os`, `tiktoken`, and `memgpt.local_llm.llm_chat_completion_wrappers` modules.

- **Core vs. Auxiliary Operations**:

- Core: The core operations of this module are loading grammar files, counting tokens, and getting available wrappers.

- Auxiliary: The auxiliary operations include the `DotDict` class which extends the dictionary class to allow dot access on properties.

- **Operational Sequence**: The `load_grammar_file` function checks if the grammar file exists, reads it if it does, and returns the read string. The `count_tokens` function gets the encoding for a specified model and returns the number of tokens in a string.

- **Performance Aspects**: Performance considerations are not explicitly mentioned in the code. However, the efficiency of the `count_tokens` function would depend on the efficiency of the encoding method used.

- **Reusability**: The utility functions and classes in this module can be reused across different parts of the system.

- **Usage**: This module is used to provide utility functions and classes that are used across different parts of the system. The functions can be imported and used as needed.

- **Assumptions**: The code assumes that the grammar file exists in the specified location. If it does not, a `FileNotFoundError` is raised.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-66.svg)

Module: utils.py

- **Module Name**: The module is named `utils.py`.

- **Primary Objectives**: This module serves two primary purposes. Firstly, it determines when to stop listening to the server through the function `condition_to_stop_receiving(response)`. Secondly, it transforms the server's response from JSON to a more readable format using the function `print_server_response(response)`.

- **Critical Functions**:

- `condition_to_stop_receiving(response)`: This function checks the type of the server response and returns True if the response type is either "agent_response_end", "agent_response_error", "command_response", or "server_error". Otherwise, it returns False.

- ``print_server_response(response)``: This function formats and prints the server's response based on its type and message type.
- **Key Variables**:
 - ``response``: It's a dictionary that contains the server's response. It's used in both functions.
- **Interdependencies**: This module doesn't appear to depend on or interact with other system components.
- **Core vs. Auxiliary Operations**: The core operations are the two defined functions, while there don't seem to be any auxiliary operations in this module.
- **Operational Sequence**: The function ``condition_to_stop_receiving(response)`` should be called first to check if the server's response indicates a stop in listening. Then, the function ``print_server_response(response)`` can be used to print the server's response.
- **Performance Aspects**: This module doesn't seem to have any specific performance considerations. It's straightforward and doesn't involve any computationally intensive operations.
- **Reusability**: The functions in this module can be reused for any application that needs to listen to a server and print its responses.
- **Usage**: This module is used to handle server responses. It checks if the server indicates a stop in listening and then prints the server's response.
- **Assumptions**: It's assumed that the server's response is a dictionary with keys "type" and potentially "message" and "message_type". It's also assumed that the response types and message types are known and limited to those checked in the functions.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-67.svg)

Module: utils.py

- **Module Name**: utils.py

- **Primary Objectives**: This module provides various utility functions for tasks such as token counting, time retrieval, JSON parsing, file reading, chunking, database reading, cost estimation, file listing, text retrieval, and schema difference calculation.

- **Critical Functions**:

- `count_tokens(s: str, model: str = "gpt-4")`: Counts the number of tokens in a string.

- `get_local_time_military()`, `get_local_time_timezone(timezone="America/Los_Angeles")`, `get_local_time(timezone=None)`: Get the current local time in various formats.

- `parse_json(string)`: Parses a JSON string.

- `prepare_archival_index(folder)`: Prepares an archival index from a folder.

- `read_in_chunks(file_object, chunk_size)`, `read_pdf_in_chunks(file, chunk_size)`, `read_in_rows_csv(file_object, chunk_size)`:

Read files in chunks.

- `prepare_archival_index_from_files(glob_pattern, tkns_per_chunk=300, model="gpt-4")`: Prepares an archival index from files.

- `estimate_openai_cost(docs)`: Estimates the cost of using OpenAI for embedding.

- `list_agent_config_files()`, `list_human_files()`, `list_persona_files()`: Lists files in respective directories.

- `get_human_text(name: str)`, `get_persona_text(name: str)`: Retrieves the text from human and persona files.

- `get_schema_diff(schema_a, schema_b)`: Computes the difference between two schemas.

- **Key Variables**:

- `DEBUG`: A boolean variable used to control the output of debug information.

- `MEMGPT_DIR`: Directory path for the MemGPT module.

- **Interdependencies**: This module interacts with several other modules including datetime, csv, difflib, demjson3, numpy, json, pytz, os, tiktoken, glob, sqlite3, fitz, tqdm, typer, memgpt, llama_index, faiss, and concurrent.futures.
- **Core vs. Auxiliary Operations**: Core operations include token counting, time retrieval, JSON parsing, file reading, chunking, and database reading. Auxiliary operations include cost estimation, file listing, text retrieval, and schema difference calculation.
- **Operational Sequence**: The operational sequence is not strictly defined and depends on the specific function being called and its requirements.
- **Performance Aspects**: Performance considerations include efficient file reading, token counting, and time retrieval. The module also includes concurrency for processing chunks of data.
- **Reusability**: The utility functions provided in this module are generic and can be reused in different contexts where similar tasks are required.
- **Usage**: This module is used as a utility module, providing helper functions that can be used throughout the project for various tasks.
- **Assumptions**: The module assumes that the file and directory paths provided to the functions exist. It also assumes that the JSON strings provided to the parse_json function are valid JSON strings.

Flow Diagram [via mermaid]

Module: utils.py

- **Module Name**: The module is named `utils.py`.
- **Primary Objectives**: The primary purpose of this module is to provide utility functions for loading and validating YAML

configuration files. These files are used to configure the behavior of the MEMGPT system.

- **Critical Functions**:

- ``is_valid_yaml_format(yaml_data, function_set)``: This function validates the format of the YAML data and checks if all the functions in the YAML data are part of a specified function set.

- ``load_yaml_file(file_path)``: This function loads a YAML file from a given path and returns the data.

- ``load_all_presets()``: This function loads all preset configurations from the examples directory and the user-provided presets directory.

- **Key Variables**:

- ``yaml_data``: This variable holds the data loaded from a YAML file.

- ``function_set``: This variable holds a set of valid function names.

- ``file_path``: This variable holds the path to a YAML file.

- ``all_yaml_files``: This variable holds a list of all YAML files from both the examples directory and the user-provided presets directory.

- ``all_yaml_data``: This variable holds a mapping from file name to YAML data.

- **Interdependencies**: This module interacts with the ``os``, ``glob``, and ``yaml`` modules to handle file operations and YAML parsing. It also uses constants from the ``memgpt.constants`` module.

- **Core vs. Auxiliary Operations**: The core operations of this module are the loading and validation of YAML files. The creation of directories and the extraction of file names are auxiliary operations that support the core operations.

- **Operational Sequence**: First, the YAML files are located using the ``glob`` module. Then, each file is loaded and validated. If a file is valid, its data is stored in a dictionary with the file name as the key.

- **Performance Aspects**: The performance of this module largely depends on the I/O operations for loading the files and the efficiency of the YAML parsing.
- **Reusability**: This module is highly reusable as it provides generic functions for loading and validating YAML files, which are common operations in many software systems.
- **Usage**: This module is used whenever there is a need to load and validate YAML configuration files in the MEMGPT system.
- **Assumptions**: It is assumed that the YAML files follow a specific format and that all function names in the YAML data are part of a predefined set. It is also assumed that the files are located in specific directories.

Flow Diagram [via mermaid]

Module: websocket_client.py

- **Module Name**: websocket_client.py
- **Primary Objectives**: This module is designed to establish a WebSocket connection with a MemGPT server. It can initialize a new agent or load an existing one, send user messages to the agent, and receive responses from the server.
- **Critical Functions**:
 - `basic_cli_client()`: Main function that establishes the WebSocket connection and handles the communication with the server.
- **Key Variables**:
 - `DEFAULT_PORT`: The default port for the WebSocket connection.
 - `CLIENT_TIMEOUT`: The maximum time to wait for a server response.
 - `CLEAN_RESPONSES`: A flag to determine whether to print raw server responses or cleaner ones.
 - `LOAD_AGENT`: The ID of an existing agent to load. If `None`, a new agent is created.
- **Interdependencies**: This module interacts with the following components:
 - `websockets`: Used to establish the WebSocket connection.
 - `asyncio`: Used for asynchronous I/O operations.

- ``memgpt.server.websocket_protocol``: Used for creating the load and create commands and user messages.
- ``memgpt.server.websocket_server``: The server with which this client communicates.
- ``memgpt.server.utils``: Used for utility functions like checking the condition to stop receiving responses.
- **Core vs. Auxiliary Operations**: The core operation is the interaction with the MemGPT server, including sending user messages and receiving responses. Auxiliary operations include loading or creating an agent and handling timeouts or connection errors.
- **Operational Sequence**: The module first establishes a WebSocket connection, then either loads an existing agent or creates a new one. It then enters a loop where it sends user messages to the server and waits for responses. This process continues until the connection is closed or an error occurs.
- **Performance Aspects**: The module uses asynchronous operations to avoid blocking while waiting for server responses. It also includes error handling for timeouts and connection errors.
- **Reusability**: This module can be reused to communicate with any MemGPT server. The agent configuration and user messages can be customized as needed.
- **Usage**: This module is used as a client to communicate with a MemGPT server. It can be run as a standalone script.
- **Assumptions**: The module assumes that a MemGPT server is running and accessible at the specified port. It also assumes that the user will input messages when prompted.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-70.svg)

Module: websocket_interface.py

- **Module Name**: websocket_interface.py
- **Primary Objectives**: This module is designed to facilitate communication between a MemGPT agent and clients over a WebSocket. It supports both synchronous and asynchronous messaging.
- **Critical Functions**:
 - ``register_client(self, websocket)``: Registers a new client connection.
 - ``unregister_client(self, websocket)``: Unregisters a client connection.

- ``user_message(self, msg)``: Handles the reception of a user message.
- ``internal_monologue(self, msg)``: Handles the agent's internal monologue.
- ``assistant_message(self, msg)``: Handles the agent sending a message.
- ``function_message(self, msg)``: Handles the agent calling a function.
- ``_run_event_loop(self)``: Runs the dedicated event loop and handles its closure.
- ``_run_async(self, coroutine)``: Schedules coroutine to be run in the dedicated event loop.
- ``_send_to_all_clients(self, clients, msg)``: Asynchronously sends a message to all clients.
- ``close(self)``: Shuts down the WebSocket interface and its event loop.

- **Key Variables**:

- ``self.clients``: A set of all currently connected clients.
- ``self.loop``: A new event loop created for the synchronous WebSocket interface.
- ``self.thread``: A thread for running the event loop in the synchronous WebSocket interface.

- **Interdependencies**: This module interacts with the ``memgpt.interface`` and ``memgpt.server.websocket_protocol`` modules.

- **Core vs. Auxiliary Operations**: The core operations involve handling messages from the user, the agent's internal monologue, the agent sending a message, and the agent calling a function. Auxiliary operations include registering and unregistering clients, running the event loop, and scheduling coroutines.

- **Operational Sequence**: The sequence typically begins with registering a client, then receiving and handling messages from the user or the agent, and sending responses back to the client. For the synchronous interface, an event loop is started in a separate thread.

- **Performance Aspects**: The module is designed to handle multiple clients and messages concurrently, which can improve throughput and responsiveness. However, the performance may be affected by the number of clients and the load on the event loop.

- **Reusability**: The module is highly reusable. It provides a base interface that can be extended to handle different types of messages and protocols. The synchronous and asynchronous interfaces can be used in different scenarios depending on the requirements.
- **Usage**: This module is used to enable communication between a MemGPT agent and clients over a WebSocket. The clients can send messages to the agent, and the agent can send responses back to the clients.
- **Assumptions**: The module assumes that the WebSocket connections are reliable and that the clients and the agent follow the correct message protocols. It also assumes that the event loop in the synchronous interface can handle the load of the tasks scheduled on it.

Flow Diagram [via mermaid]

![diagram](./High_Level_Doc-71.svg)

Module: websocket_protocol.py

- **Module Name**: The module is named as `websocket_protocol.py`.
- **Primary Objectives**: The primary objective of this module is to handle the communication between the server and the client using WebSockets. It defines various functions to create and send JSON-based messages for different scenarios.
- **Critical Functions**:
 - `server_error(msg)`: Sends a server error message.
 - `server_command_response(status)`: Sends a command response with a given status.
 - `server_agent_response_error(msg)`: Sends an agent response error message.
 - `server_agent_response_start()`: Sends a start signal for agent response.
 - `server_agent_response_end()`: Sends an end signal for agent response.
 - `server_agent_internal_monologue(msg)`: Sends an internal monologue message from the agent.

- ``server_agent_assistant_message(msg)``: Sends a message from the assistant agent.
 - ``server_agent_function_message(msg)``: Sends a function message from the agent.
 - ``client_user_message(msg, agent_name=None)``: Sends a user message, optionally with the agent's name.
 - ``client_command_create(config)``: Sends a command to create an agent with a given configuration.
 - ``client_command_load(agent_name)``: Sends a command to load an agent with a given name.
- **Key Variables**: The key variables in this module are the message (``msg``), status (``status``), agent name (``agent_name``), and configuration (``config``).
- **Interdependencies**: This module is likely to interact with both the server and client modules in the system.
- **Core vs. Auxiliary Operations**: Core operations include sending and receiving various types of messages between the server and client. Auxiliary operations might include formatting the messages or handling errors.
- **Operational Sequence**: The operational sequence is not explicitly defined in this module. However, it can be inferred that messages are sent and received in response to certain events or commands.
- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the use of JSON for message formatting suggests a focus on lightweight data interchange.
- **Reusability**: This module appears to be highly reusable. The functions provided can be used to handle a variety of communication scenarios between a server and client.
- **Usage**: This module is used to handle server-client communication in a WebSocket context. The functions can be used to send different types of messages based on the situation.

- **Assumptions**: The code assumes that the server and client are capable of handling JSON-based messages. It also assumes that an appropriate WebSocket connection exists between the server and client.

Flow Diagram [via mermaid]

![[diagram]](./High_Level_Doc-72.svg)

Module: websocket_server.py

- **Module Name**: websocket_server.py

- **Primary Objectives**: This module is designed to create a WebSocket server that can handle various client requests, such as creating a new AI agent, loading an existing agent, and processing user messages.

- **Critical Functions**:

- `__init__(self, host="localhost", port=DEFAULT_PORT)`: Initializes the WebSocket server with default host as localhost and port as DEFAULT_PORT.

- `run_step(self, user_message, first_message=False, no_verify=False)`: Runs a step in the agent's conversation based on the user's message.

- `handle_client(self, websocket, path)`: Handles client connections and manages incoming messages from the client.

- `create_new_agent(self, config)`: Creates a new AI agent based on the provided configuration.

- `load_agent(self, agent_name)`: Loads an existing AI agent based on the agent's name.

- `initialize_server(self)`: Initializes the server.

- `start_server(self)`: Starts the server.

- `run(self)`: Runs the server.

- **Key Variables**:

- `self.host`: The host on which the server is running.

- `self.port`: The port on which the server is running.

- `self.interface`: The interface for the server.

- ``self.agent``: The AI agent that the server is currently working with.

- ``self.agent_name``: The name of the AI agent that the server is currently working with.

- **Interdependencies**: This module interacts with several other modules such as ``memgpt.server.websocket_interface``, ``memgpt.server.constants``, ``memgpt.server.websocket_protocol``, ``memgpt.system``, and ``memgpt.constants``.

- **Core vs. Auxiliary Operations**: Core operations include handling client requests and managing AI agents (creating, loading, and processing user messages). Auxiliary operations include initializing and running the server.

- **Operational Sequence**: The server is initialized, then it starts and waits for client connections. When a client connects, it handles the client's requests which could be creating a new agent, loading an existing agent, or processing a user message.

- **Performance Aspects**: This module uses asynchronous programming (async/await) to handle client requests, which can improve the server's performance by allowing it to handle multiple requests concurrently.

- **Reusability**: This module is highly reusable. The WebSocket server can be used to manage AI agents in different contexts. The methods for creating and loading agents can also be reused in other modules or applications.

- **Usage**: This module is used to create a WebSocket server that can handle various client requests related to AI agents.

- **Assumptions**: The module assumes that the client will send JSON formatted data. It also assumes that the client will send valid commands and that the necessary agent configurations exist when an agent is being created or loaded.

Flow Diagram [via mermaid]

![[diagram]](./High_Level_Doc-73.svg)

Module: wrapper_base.py

- **Module Name**: The module is named ``wrapper_base.py``.

- **Primary Objectives**: This module is designed to provide an abstract base class (ABC) for a chat completion wrapper. This wrapper is responsible for converting chat completion to a single prompt string and transforming the LLM output string into a chat completion response.
- **Critical Functions**: The module contains two abstract methods:
 1. `chat_completion_to_prompt(self, messages, functions)`: This method is supposed to convert a ChatCompletion object into a single prompt string.
 2. `output_to_chat_completion_response(self, raw_llm_output)`: This method is supposed to convert the raw output from the LLM into a ChatCompletion response.
- **Key Variables**: The key variables are `messages`, `functions`, and `raw_llm_output`. The `messages` and `functions` are inputs for the `chat_completion_to_prompt` method, and `raw_llm_output` is an input for the `output_to_chat_completion_response` method.
- **Interdependencies**: This module is likely to interact with other modules that implement this abstract base class. The interactions would occur when the abstract methods are called and overridden. In addition, it depends on the `abc` module from Python's standard library.
- **Core vs. Auxiliary Operations**: The core operations of this module are the two abstract methods. There are no auxiliary operations as this is a base class providing an interface for other classes to implement.
- **Operational Sequence**: Being an abstract base class, it doesn't have a distinct operational sequence. The sequence will depend on the specific implementation in the child class.
- **Performance Aspects**: Performance considerations are not directly applicable to this module as it provides abstract methods. However, the performance of the child classes can be affected by how efficiently these methods are implemented.

- **Reusability**: This module is highly reusable. It provides a template for creating new classes that transform chat completion to a single prompt string and LLM output to a chat completion response.

- **Usage**: This module is used by creating a child class and implementing the abstract methods. The child class can then be used to convert between chat completions and LLM outputs.

- **Assumptions**: The module assumes that any class that inherits from it will provide concrete implementations of the abstract methods. It also assumes that the inputs to these methods will be in the expected format.

Flow Diagram [via mermaid]

Module: zephyr.py

- **Module Name**: ZephyrMistralWrapper and ZephyrMistralInnerMonologueWrapper

- **Primary Objectives**: The primary purpose of this module is to serve as a wrapper for Zephyr Alpha and Beta, Mistral 7B models. It formats a prompt that generates JSON, with or without inner thoughts.

- **Critical Functions**:

- `__init__`: Initializes the wrapper with various parameters.
- `chat_completion_to_prompt`: Converts the chat messages and functions into a formatted prompt for the model.
- `create_function_description`: Creates a string description of a function schema.
- `create_function_call`: Creates a function call in JSON format.
- `clean_function_args`: Performs some basic cleaning of function arguments.
- `output_to_chat_completion_response`: Converts the raw output of the model into a formatted response.

- **Key Variables**:

- ``simplify_json_content``: Determines whether to simplify the JSON content.
 - ``clean_func_args``: Determines whether to clean function arguments.
 - ``include_assistant_prefix``: Determines whether to include an assistant prefix in the prompt.
 - ``include_opening_brance_in_prefix``: Determines whether to include an opening brace in the prefix.
 - ``include_section_separators``: Determines whether to include section separators in the prompt.
- **Interdependencies**: This module interacts with other system components like the json parser and the LLMChatCompletionWrapper.
- **Core vs. Auxiliary Operations**: Core operations include the generation of the prompt and the conversion of the model's raw output into a formatted response. Auxiliary operations include the creation of function descriptions and function calls and the cleaning of function arguments.
- **Operational Sequence**: The module first initializes with the given parameters. It then converts chat messages and functions into a formatted prompt, which is fed into the model. The model's raw output is then converted into a formatted response.
- **Performance Aspects**: The module's performance mainly depends on the underlying model's performance. The efficiency of the functions for prompt creation and output formatting also impacts the overall performance.
- **Reusability**: The module is highly reusable. It can be used with any chat data and functions, provided they are in the required format.
- **Usage**: The module is used by initializing it with the required parameters, calling ``chat_completion_to_prompt`` with the chat messages and functions, running the model with the generated prompt, and then converting the model's output into a response using ``output_to_chat_completion_response``.

- **Assumptions**: The module assumes that the chat messages and functions are in a specific format. It also assumes that the model's output is in JSON format.

Flow Diagram [via mermaid]

![[diagram]](/High_Level_Doc-75.svg)

humans.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\humans.py_Doc.md):

Module: humans.py

- **Module Name**: The module is named humans.py.

- **Primary Objectives**: The purpose of this module is to fetch and return the contents of a text file given its key. If the key does not include a .txt extension, it appends it before trying to open the file.

- **Critical Functions**: The main function in this module is `get_human_text(key=DEFAULT, dir=None)`. This function takes in a key and a directory. If no directory is provided, it sets the directory to the examples folder in the current file's directory. It then constructs a file path and attempts to open and read the file at that path. If the file does not exist, it raises a `FileNotFoundError`.

- **Key Variables**:

- `key`: This is the name of the text file to be read.

- `dir`: This is the directory where the file is located.

- `DEFAULT`: This is the default key used if no key is provided.

- `file_path`: This is the full path to the file constructed using `dir` and `key`.

- **Interdependencies**: This module depends on the `os` module for interacting with the file system.

- **Core vs. Auxiliary Operations**: The core operation of this module is reading a file and returning its contents. The construction of

the file path and the handling of the `FileNotFoundError` are auxiliary operations that support the core operation.

- **Operational Sequence**: The function first checks if a directory is provided, if not it sets the directory to the examples folder. It then constructs the file path using the directory and key. It then tries to open and read the file, returning the contents if successful and raising a `FileNotFoundError` if not.

- **Performance Aspects**: The performance of this module depends on the file system's speed and the size of the text file being read.

- **Reusability**: This module is highly reusable. It can be used in any situation where you need to read the contents of a text file given its name and optionally its directory.

- **Usage**: This module can be used by importing it and calling the `get_human_text` function with the appropriate arguments.

- **Assumptions**: This module assumes that the file to be read is a text file and is located either in the provided directory or the examples directory in the current file's directory. It also assumes that the file exists, and if it doesn't, it raises a `FileNotFoundError`.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[Human] -- Request --> B((get_human_text))
```

```
B -- Response --> A
```

```
B -- Read File --> C[File]
```

```
C -- File Data --> B
```

```
```
```

interface.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\interface.py_Doc.md):

Module: interface.py

- **Module Name**: interface.py

- **Primary Objectives**: This module primarily serves as an interface for handling MemGPT-related events, including user messages, internal monologue, assistant messages, and function calls. It also includes a command-line interface for dumping agent events.

- **Critical Functions**:

- `user_message(self, msg)`: Handles the receipt of a user message.
- `internal_monologue(self, msg)`: Handles the generation of some internal monologue.
- `assistant_message(self, msg)`: Handles the use of `send_message`.
- `function_message(self, msg)`: Handles the call of a function.
- `print_messages(message_sequence, dump=False)`: Prints a sequence of messages.
- `print_messages_simple(message_sequence)`: Prints a simple sequence of messages.
- `print_messages_raw(message_sequence)`: Prints a raw sequence of messages.

- **Key Variables**:

- `DEBUG`: A boolean variable that controls the level of message output in the terminal.
- `STRIP_UI`: A boolean variable that controls whether to strip the user interface.
- `msg`: A string or dictionary representing a message.

- **Interdependencies**: This module interacts with the `abc`, `json`, `re`, `colorama`, and `memgpt.utils` modules.

- **Core vs. Auxiliary Operations**: Core operations involve handling different types of messages (user, assistant, function, etc.) and printing them. Auxiliary operations involve formatting and color-coding the messages for better readability.

- **Operational Sequence**: When a message is received, the appropriate handler function is called based on the type of the message. If the message is to be printed, it is passed to one of the `print_messages` functions, which formats the message and prints it to the console.
- **Performance Aspects**: This module primarily involves I/O operations, so its performance depends on the efficiency of these operations.
- **Reusability**: This module is highly reusable. The `AgentInterface`` class can be subclassed to create new interfaces for handling MemGPT-related events. The `CLIInterface`` class provides a basic command-line interface that can be used in any program that needs to dump agent events to the console.
- **Usage**: This module is used to handle and display MemGPT-related events in a user-friendly manner.
- **Assumptions**: The module assumes that all messages are either strings or dictionaries. It also assumes that all messages can be formatted and color-coded for display in the console.

Mermaid Diagram

```
```mermaid
```

```
graph TD;
```

```
A[interface.py] --> B[abc];
```

```
A --> C[json];
```

```
A --> D[re];
```

```
A --> E[colorama];
```

```
A --> F[memgpt.utils];
```

```
A --> G[printd];
```

```
A --> H[init];
```

```
A --> I[STRIP_UI];
```

```
A --> J[AgentInterface];

A --> K[CLIInterface];

B --> L[ABC];

C --> M[abstract];

C --> N[re];

E --> O[Fore];

E --> P[Style];

H --> Q[autoreset];

J --> R[user_message];

J --> S[internal_monologue];

J --> T[assistant_message];

J --> U[function_message];

K --> V[important_message];

K --> W[warning_message];

K --> X[internal_monologue];

K --> Y[assistant_message];

K --> Z[memory_message];

K --> AA[system_message];

K --> AB[user_message];

K --> AC[function_message];

...

Module: interface.py

- **Module Name**: interface.py

- **Primary Objectives**: The module is designed to manage and display messages in a chat-based interface. It provides a way to handle different types of messages (such as user messages, system messages, assistant messages, memory messages, and
```

function messages), format them for display, and manage a buffer for these messages.

- **Critical Functions**:

- ``set_message_list``: Sets the message list for the DummyInterface.
- ``internal_monologue``: Handles internal monologue messages.
- ``assistant_message``: Handles assistant messages.
- ``memory_message``: Handles memory messages.
- ``system_message``: Handles system messages.
- ``user_message``: Handles user messages.
- ``function_message``: Handles function messages.
- ``reset_message_list``: Clears the buffer, called before every step when using MemGPT+AutoGen.
- ``__init__``: Initializes the AutoGenInterface with various parameters.

- **Key Variables**:

- ``message_list``: A list holding all the messages.
- ``fancy``: A boolean variable to control the display of colored outputs and emoji prefixes.
- ``show_user_message``, ``show_inner_thoughts``, ``show_function_outputs``: Booleans to control the display of different types of messages.
- ``debug``: A boolean to control the debug mode.

- **Interdependencies**: The module relies on the ``json`` and ``re`` modules for parsing and regular expression operations, and ``colorama`` for colored terminal text.

- **Core vs. Auxiliary Operations**: Core operations include handling and displaying different types of messages. Auxiliary operations include managing the message buffer and controlling the display settings.

- **Operational Sequence**: The module defines two classes: DummyInterface and AutoGenInterface. The DummyInterface provides a basic structure for message handling, while the AutoGenInterface extends this with additional functionality. The AutoGenInterface initializes with various parameters, handles different types of messages, and manages a buffer for these messages.
- **Performance Aspects**: The module is designed for efficient handling and display of messages. The use of a buffer helps to manage the flow of messages and the various display options allow for flexible and efficient use.
- **Reusability**: The module is highly reusable. The classes defined can be used as a base for any chat-based interface that needs to handle and display a variety of message types.
- **Usage**: The module is used to handle and display messages in a chat-based interface. It is used by creating an instance of the AutoGenInterface class and calling the appropriate methods to handle different types of messages.
- **Assumptions**: It is assumed that messages are provided in a specific format (e.g., as a string or a dictionary). It's also assumed that the colorama module is available for colored terminal text.

## Mermaid Diagram

```mermaid

graph TD

A[User Message] --> B(AutoGenInterface)

B --> C{Decide Message Type}

C --> |User Message| D[Assistant Message]

C --> |System Message| E[System Message]

C --> |Memory Message| F[Memory Message]

C --> |Function Message| G[Function Message]

D --> H[Process User Message]

E --> I[Process System Message]

F --> J[Process Memory Message]

G --> K[Process Function Message]

...

json_parser.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\json_parser.py_Doc.md):

Module: json_parser.py

- **Module Name**: json_parser.py

- **Primary Objectives**: This module is designed to parse JSON data, handle errors, and repair malformed JSON strings. It is intended to extract information from JSON strings and deal with any inconsistencies or errors that may occur during the extraction process.

- **Critical Functions**:

- `extract_first_json(string)`: Extracts the first JSON object from a string.

- `add_missing_heartbeat(llm_json)`: Inserts heartbeat requests into messages that should have them.

- `repair_json_string(json_string)`: Repairs a JSON string where line feeds were accidentally added within string literals.

- `repair_even_worse_json(json_string)`: Repairs a malformed JSON string where string literals are broken up and not properly enclosed in quotes.

- `clean_json(raw_llm_output, messages=None, functions=None)`: Tries a bunch of hacks to parse the data coming out of the LLM.

- **Key Variables**:

- `depth` and `start_index` in `extract_first_json(string)`: Used to track the depth of nested JSON objects and the start index of the first JSON object.

- `new_string`, `in_string`, and `escape` in `repair_json_string(json_string)`: Used to create the repaired JSON string and track the current state of the string parsing.

- ``in_message`, `in_string`, `escape`, `message_content`, and `new_json_parts`` in ``repair_even_worse_json(json_string)``: Used to track the current state of the string parsing and store the parts of the repaired JSON string.
- ``data`` in ``clean_json(raw_llm_output, messages=None, functions=None)``: Stores the parsed JSON data.
- **Interdependencies**: This module seems to be independent of other system components, but it imports the ``json`` module for JSON operations and ``memgpt.utils`` for debugging purposes.
- **Core vs. Auxiliary Operations**: The core operations of this module include the extraction, repair, and cleaning of JSON strings. Auxiliary operations include error handling and debugging.
- **Operational Sequence**: The ``clean_json`` function attempts to parse the JSON data and, if it encounters errors, it tries various methods to repair the JSON string until it succeeds or exhausts all possibilities.
- **Performance Aspects**: The module's performance may be affected by the size of the input JSON string and the extent of its malformation. More complex or larger JSON strings may require more processing time.
- **Reusability**: The functions in this module are highly reusable for any tasks that involve parsing and repairing JSON strings.
- **Usage**: This module is used to parse and repair JSON strings in a larger system, likely as part of data preprocessing or cleanup.
- **Assumptions**: The module assumes that the input is a JSON string or can be converted into one. It also assumes that any errors encountered during parsing are due to malformation of the JSON string and can be fixed by one of the repair methods.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[json_parser.py] --> B[import json]
```



A --> C[extract\_first\_json]

A --> D[add\_missing\_heartbeat]

A --> E[repair\_json\_string]

A --> F[repair\_even\_worse\_json]

A --> G[clean\_json]

...

legacy\_api.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\legacy\_api.py\_Doc.md):

## Module: legacy\_api.py

- **Module Name**: The module is named as `legacy\_api.py`.

- **Primary Objectives**: The purpose of this module is to interact with a web server to generate text based on the provided prompt and settings. It also validates the input and handles the response from the server.

- **Critical Functions**: The main function in this module is `get\_webui\_completion()`. This function makes a POST request to the specified endpoint with the given prompt and settings, and returns the generated text.

- **Key Variables**:

- `endpoint`: The API endpoint to which the request is sent.

- `prompt`: The text prompt for the text generation.

- `context\_window`: The maximum number of tokens that the context can contain.

- `settings`: The settings for the text generation.

- `grammar`: The grammar file to be used for text generation.

- `request`: The request object containing the prompt and settings.

- `URI`: The full URL of the API endpoint.

- ``response``: The response received from the server.
- ``result``: The generated text.
- **Interdependencies**: This module interacts with the ``requests`` library for making HTTP requests, the ``urllib.parse`` library for URL manipulation, and the ``legacy_settings`` and ``utils`` modules from the same project.
- **Core vs. Auxiliary Operations**: The core operation of this module is making the POST request to the server and handling the response. The auxiliary operations include validating the input, constructing the URL, and loading the grammar file.
- **Operational Sequence**: The function first validates the input, constructs the request object and the URL, and then makes the POST request. It then checks the response status code and returns the generated text if the request was successful.
- **Performance Aspects**: The performance of this module depends on the efficiency of the network request and the server's response time. In addition, the ``count_tokens()`` function and the loading of the grammar file can also affect the performance.
- **Reusability**: This module is highly reusable as it provides a generic function for making POST requests to a text generation server. The function can be used with different prompts, settings, and grammar files.
- **Usage**: This module can be used in any project that requires text generation based on a prompt and specific settings. The user needs to provide the server endpoint, the prompt, and the settings.
- **Assumptions**: The module assumes that the server endpoint starts with "http://" or "https://", and that the server is running and reachable. It also assumes that the prompt does not exceed the maximum context length.

## ## Mermaid Diagram

```mermaid

graph LR

A["get_webui_completion Function"] --> B["Count Prompt Tokens"]

A --> C["Check Prompt Tokens"]

A --> D["Prepare Request"]

A --> E["Load Grammar File"]

A --> F["Check Endpoint"]

A --> G["Send Request"]

B --> C

C --> D

D --> E

E --> F

F --> G

G --> H["Handle Response"]

H --> I["Return Result"]

...

legacy_settings.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\legacy_settings.py_Doc.md):

Module: legacy_settings.py

- **Module Name**: The module name is `legacy_settings.py`.

- **Primary Objectives**: This module seems to handle settings related to text processing and tokenization in a legacy system. It defines stopping strings and maximum new tokens, which are likely used for parsing or generating text.

- **Critical Functions**: The module does not seem to contain any functions or methods. It appears to be a configuration file.

- **Key Variables**:

- ``stopping_strings``: A list of strings that signal the end of a text segment.
- ``max_new_tokens``: The maximum number of new tokens that can be generated, set to 3072.
- ``truncation_length``: This variable seems to be commented out but it likely sets the maximum length of a text segment. It appears to be set to a constant ``LLM_MAX_TOKENS`` imported from another module.
- **Interdependencies**: The module imports ``LLM_MAX_TOKENS`` from a ``constants`` module. It likely interacts with other parts of the system that require these settings, including text parsing and generating components.
- **Core vs. Auxiliary Operations**: As a configuration file, it does not seem to have core or auxiliary operations. All the settings it provides are essential for the components that depend on it.
- **Operational Sequence**: There doesn't appear to be a distinct operational sequence in this module as it is a configuration file.
- **Performance Aspects**: The settings in this module likely affect the system's performance. For example, ``max_new_tokens`` could limit the size of generated text, and ``stopping_strings`` could impact the speed of text parsing.
- **Reusability**: This module seems highly reusable. The settings it provides could be used by any component that needs to parse or generate text.
- **Usage**: This module is likely used by importing it into other parts of the system. The importing components can then access the settings it provides.
- **Assumptions**: The module seems to assume that the ``stopping_strings`` are sufficient to signal the end of a text segment. It also assumes that ``max_new_tokens`` is an appropriate limit for the size of generated text. The commented-out ``truncation_length`` suggests that there may be an assumption about the maximum length of a text segment.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[User] -->|Input| B[legacy_settings.py]
```

```
B -->|Process| C[constants.py]
```

```
C -->|Output| D[LLM_MAX_TOKENS]
```

```
D -->|Return| A
```

```
```
```

local.py_Doc.md (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\local.py_Doc.md):

Module: local.py

- **Module Name**: The module is named 'local.py'.

- **Primary Objectives**: The module's primary purpose is to handle data storage and retrieval operations locally, using the LlamaIndex library for data indexing and storage.

- **Critical Functions**:

- `__init__`: Initializes the LocalStorageConnector class, sets up the context, and loads or creates the index.

- `get_nodes`: Returns the nodes in the Llama index.

- `add_nodes`: Adds nodes to the Llama index.

- `get_all_paginated`: Returns all passages in the index, paginated.

- `get_all`: Returns all passages up to a specified limit.

- `get`: Placeholder function to get a specific passage by id.

- `insert`: Inserts a passage into the index.

- `insert_many`: Inserts multiple passages into the index.

- `query`: Queries the index for passages based on a given query and vector.

- `save`: Saves the current state of the nodes to a pickle file.

- ``list_loaded_data``: Lists all the data sources currently loaded.

- ``size``: Returns the size of the index.

- ****Key Variables****:

- ``self.name``: The name of the storage connector.

- ``self.save_directory``: The directory where the index is saved.

- ``self.embed_model``: The embedding model used.

- ``self.service_context``: The service context for the Llama index.

- ``self.save_path``: The path where the nodes pickle file is saved.

- ``self.nodes``: The list of nodes in the index.

- ``self.index``: The Llama index itself.

- ****Interdependencies****: This module interacts with other system components such as the ``memgpt`` and ``llama_index`` modules for configurations, constants, storage, and indexing.

- ****Core vs. Auxiliary Operations****: Core operations include initializing the class, getting and adding nodes, and querying the index.

Auxiliary operations include saving the index, listing loaded data, and getting the size of the index.

- ****Operational Sequence****: The module initializes the class and loads or creates the index. It then provides functions to add nodes, get nodes, query the index, and save the index.

- ****Performance Aspects****: The module uses Llama index for efficient storage and retrieval of data. However, the ``query`` function may be slow due to the retrieval process.

- ****Reusability****: The module is highly reusable, as it provides a generic local storage connector that can be used with any data that can be indexed with Llama index.

- **Usage**: The module is used to handle local data storage and retrieval operations. It is used to add nodes to the index, get nodes from the index, query the index, and save the index.

- **Assumptions**: The module assumes that the embedding model and service context are set up correctly. It also assumes that the nodes pickle file exists if the save path exists.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[LocalStorageConnector] -- add_nodes --> B((VectorStoreIndex))
```

```
A -- get_nodes --> B
```

```
A -- get_all --> B
```

```
A -- get_all_paginated --> B
```

```
A -- get --> B
```

```
A -- insert --> B
```

```
A -- insert_many --> B
```

```
A -- query --> B
```

```
A -- save --> B
```

```
A -- list_loaded_data --> B
```

```
A -- size --> B
```

```
B -- nodes --> A
```

```
```
```

main.py_Doc.md (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\main.py_Doc.md):

Module: main.py

Here is a comprehensive analysis of the provided Python module `main.py`:

****Module Name**:** main

****Primary Objectives**:** This is the main module that handles running the MemGPT conversational agent system from the command line. It initializes the agent, processes user input and runs the conversation loop.

****Critical Functions**:**

- ``main()``: Parses command line arguments and initializes the MemGPT agent.
- ``run_agent_loop()``: Runs the main conversation loop, passing user input to the agent and printing responses.

****Key Variables**:**

- ``memgpt_agent``: The MemGPT Agent instance that handles the conversation.
- ``user_input``: Stores the latest user input string.
- ``skip_next_user_input``: Flag to skip requesting next user input.
- ``user_message``: Packaged user message dict to pass to agent.
- ``cfg``: The MemGPT Config object with parameters.

****Interdependencies**:**

- Depends on ``memgpt.agent``, ``memgpt.system``, ``memgpt.interface`` and other MemGPT modules to initialize agent, process user input/output.
- Interacts with ``StorageConnector`` to attach data sources.
- Uses ``questionary`` for CLI interactions.

****Core vs Auxiliary Operations**:**

- Core: ``main()``, ``run_agent_loop()``
- Auxiliary: argument parsing, CLI interactions, attaching data sources.

****Operational Sequence**:**

1. Parse arguments and initialize MemGPT agent and config.
2. Print welcome message.
3. Enter input loop:
 - Get user input.
 - Handle CLI commands (/exit, /load etc).
 - Pass non-command input to agent.
 - Print agent response.
4. Exit when user enters '/exit'.

****Performance Aspects**:**

- Uses `rich` status bar to show "Thinking..." when agent is processing to avoid blocking.
- Handles exceptions during `agent.step()` to avoid crashes.

****Reusability**:**

- `main()` and `run_agent_loop()` could be imported and reused by other modules to run the CLI conversation loop.
- CLI argument parsing logic could be reused/imported separately.

****Usage**:** This module is intended to be run as a CLI program to start a MemGPT conversational agent session:

...

python main.py

...

****Assumptions**:**

- User will provide inputs via CLI when prompted.
- `memgpt.agent` and other modules are available to import.
- Required packages like `questionary` are installed.

Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[External Entity] -->|Data Flow 1| B((Process 1))
```

```
B --> |Data Flow 2| C((Process 2))
```

```
C --> |Data Flow 3| D[External Entity]
```

```
```
```

Module: main.py

Here is the analysis based on the provided code snippet:

- **Module Name**: The module's name is `main.py`.
- **Primary Objectives**: The primary purpose of this module is to run the application from the `memgpt.main` module.
- **Critical Functions**: The critical function in this module is `app()`. This function is responsible for initializing and running the application.
- **Key Variables**: There are no explicit variables in this brief code snippet. However, implicit variables are likely to be present within the `app()` function in the `memgpt.main` module.
- **Interdependencies**: This module is dependent on the `memgpt.main` module, specifically the `app` function within that module.
- **Core vs. Auxiliary Operations**: The core operation in this module is running the `app()` function. There are no auxiliary operations

in this code snippet.

- **Operational Sequence**: The operational sequence is straightforward - the `app()` function from the `memgpt.main` module is called and executed.
- **Performance Aspects**: Performance considerations are not evident from this code snippet. They would be dependent on what is inside the `app()` function from the `memgpt.main` module.
- **Reusability**: The code snippet is quite reusable, as it simply calls the `app()` function from the `memgpt.main` module. As long as the `app()` function is designed to be reusable, this code snippet will also be reusable.
- **Usage**: This module is used to initialize and run the application by calling the `app()` function from the `memgpt.main` module.
- **Assumptions**: The main assumption here is that the `memgpt.main` module and the `app()` function within it exist and function as expected. Furthermore, it assumes that the `app()` function does not require any arguments.

Please note that this analysis might not be fully accurate or complete due to the limited context and code snippet provided. For a more comprehensive analysis, the full code of the `memgpt.main` module and its `app()` function would be needed.

Mermaid Diagram

```
```mermaid
```

```
graph TD;
```

```
 A(Main.py) -- Receives input --> B(Process Data);
```

```
 B -- Sends output --> C(Display Result);
```

```
...
```

memgpt\_agent.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\memgpt\_agent.py\_Doc.md):

## Module: memgpt\_agent.py

- **Module Name**: memgpt\_agent.py

- **Primary Objectives**: This module defines the MemGPTAgent class and its associated methods. It is designed to create a GPT-based agent that can interact in a conversational manner, load and attach data, and handle various types of user messages.

- **Critical Functions**:

- `create_memgpt_autogen_agent_from_config`: This function creates an AutoGen agent from a given configuration.

- `create_autogen_memgpt_agent`: This function creates an AutoGen MemGPT agent with specified parameters.

- `load`: This function loads data based on given type.

- `attach`: This function attaches new data to the agent.

- `load_and_attach`: This function loads and attaches data to the agent.

- `_generate_reply_for_user_message`: This function generates a reply for a user message.

- `pretty_concat`: This function concatenates all of MemGPT's steps into one and returns as a single message.

- **Key Variables**:

- `name`: The name of the agent.

- `system_message`: A system message to initialize the agent.

- `is_termination_msg`: A function to determine if a message should terminate the conversation.

- `max_consecutive_auto_reply`: The maximum number of consecutive automatic replies.

- `human_input_mode`: The mode of human input.

- `function_map`: A map of functions.

- `code_execution_config`: The configuration for code execution.

- `llm_config`: The configuration for the language model.

- `default_auto_reply`: The default automatic reply.

- ``interface_kwargs``: Arguments for the interface.
- **Interdependencies**: This module interacts with several other modules such as ``autogen.agentchat``, ``memgpt.agent``, ``memgpt.autogen.interface``, ``memgpt.persistence_manager``, ``memgpt.system``, ``memgpt.constants``, ``memgpt.presets.presets``, ``memgpt.personas``, ``memgpt.humans``, ``memgpt.config``, ``memgpt.cli.cli``, ``memgpt.cli.cli_load``, and ``memgpt.connectors.storage``.
- **Core vs. Auxiliary Operations**: The core operations are the creation and interaction of the MemGPT agent, including loading and attaching data, and generating replies for user messages. Auxiliary operations include formatting other agent messages, finding the last user message, finding new messages, and pretty concatenating messages.
- **Operational Sequence**: The module first creates an agent with a given configuration. Then, it loads and attaches data to the agent. After that, it generates replies for user messages and formats the messages.
- **Performance Aspects**: The module uses a GPT model, which can be computationally intensive. It also handles data loading and attachment, which might be IO-bound.
- **Reusability**: The module is highly reusable. It can be used to create various types of conversational agents with different configurations.
- **Usage**: This module is used to create a conversational agent that can interact with users, load and attach data, and handle various types of user messages.
- **Assumptions**: The module assumes that the data to be loaded and attached is available and in the correct format. It also assumes that the GPT model is available and properly configured.

## Mermaid Diagram

```
```mermaid
```

graph TD

A[create_memgpt_autogen_agent_from_config] --> B[create_autogen_memgpt_agent]

B --> C[create_autogen_memgpt_agent]

B --> D[UserProxyAgent]

B --> E[GroupChat]

E --> F[GroupChatManager]

C --> G[AutoGenInterface]

C --> H[LocalStateManager]

C --> I[presets.use_preset]

I --> J[MemGPTAgent]

...

memory.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\memory.py_Doc.md):

Module: memory.py

Here is a comprehensive analysis of the memory.py module:

Module Name: memory.py

Primary Objectives: Provides implementations for the core memory, archival memory, and recall memory components of an AI assistant agent. Enables editing, querying, and persistence of memories.

Critical Functions:

- CoreMemory: Manages the core persona and human memories. Allows editing with character limits.
- ArchivalMemory (interface): Defines interface for archival memories.
- DummyArchivalMemory: Simple in-memory archival memory with text search.

- DummyArchivalMemoryWithEmbeddings: Adds embedding based search to dummy archival.
- DummyArchivalMemoryWithFaiss: Uses Faiss for fast nearest neighbors search.
- RecallMemory (interface): Defines interface for recall memories.
- DummyRecallMemory: Simple in-memory recall memory with text and date search.
- DummyRecallMemoryWithEmbeddings: Adds embedding based search.
- LocalArchivalMemory: Archival memory using Llama Index for search.
- EmbeddingArchivalMemory: Archival memory using custom storage and embeddings.

****Key Variables**:**

- self._archive: Holds documents in dummy archival memories.
- self._message_logs: Holds message logs in dummy recall memories.
- self.index: Llama Index object for search in LocalArchivalMemory.
- self.storage: Custom storage connector in EmbeddingArchivalMemory.

****Interdependencies**:**

- Integrates with other system components like agent config, persistence manager, embeddings module.
- Relies on external libraries like Llama Index, Faiss, Storage Connectors.

****Core vs Auxiliary Operations**:**

- Core operations involve managing and editing the memories, inserting documents, and querying.
- Auxiliary operations are things like date validation, embedding management.

****Operational Sequence**:**

1. Memories initialized with config parameters and optional existing data.
2. Core memory edited via wrapper methods.
3. New info inserted into archival memories.

4. Queries executed on archival and recall memories.

5. Results returned.

****Performance Aspects**:**

- Llama Index and Faiss provide optimized search performance.
- Caching embeddings and search results avoids repeat expensive computations.
- Chunking strings for embedding improves efficiency.

****Reusability**:**

- Interfaces allow swapping underlying implementation.
- Config driven design allows reuse across agents.

****Usage**:**

- Used by agent during conversations to manage memory.
- Persistence manager handles loading and saving memory state.

****Assumptions**:**

- Agent config and parameters are provided.
- External libs like Llama Index are installed.
- Appropriate storage backends exist if configured.

In summary, the memory module provides key capabilities for an AI agent to manage both short-term and long-term memories in a performant and reusable manner. The interfaces and config driven design allow flexibility in the underlying implementations.

Mermaid Diagram

```mermaid

graph TD



A[External entity] --> B[Process 1]

B --> C[Process 2]

C --> D[Data store]

...

openai\_parallel\_request\_processor.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\openai\_parallel\_request\_processor.py\_Doc.md):

## Module: openai\_parallel\_request\_processor.py

- **Module Name**: openai\_parallel\_request\_processor.py

- **Primary Objectives**:

This module is designed to process a large number of API requests in parallel while staying under the rate limits set by OpenAI. It provides a way to efficiently handle a high volume of requests without exceeding the rate limits and without causing the system to run out of memory.

- **Critical Functions**:

The main function, `process_api_requests_from_file()`, reads API requests from a file, processes them in parallel, and saves the results. The `APIRequest` class represents an API request and contains a method, `call_api()`, to make an API call and save the results. The `StatusTracker` class stores metadata about the script's progress. The `append_to_jsonl()` function appends a JSON payload to the end of a JSONL file.

- **Key Variables**:

The module uses several key variables such as `requests_filepath`, `save_filepath`, `request_url`, `api_key`, `max_requests_per_minute`, `max_tokens_per_minute`, `token_encoding_name`, `max_attempts`, and `logging_level`.

#### - **\*\*Interdependencies\*\***:

This module relies on several Python libraries including ``aiohttp`` for making API calls concurrently, ``argparse`` for running the script from the command line, ``asyncio`` for running API calls concurrently, ``json`` for saving results to a JSONL file, ``logging`` for logging rate limit warnings and other messages, ``os`` for reading the API key, ``re`` for matching the endpoint from the request URL, ``tiktoken`` for counting tokens, and ``time`` for sleeping after a rate limit is hit.

#### - **\*\*Core vs. Auxiliary Operations\*\***:

The core operation of this module is to process API requests in parallel while staying under the rate limits. Auxiliary operations include reading API requests from a file, saving results to a file, logging rate limit warnings and other messages, and counting tokens.

#### - **\*\*Operational Sequence\*\***:

The script first initializes variables and opens the file containing the API requests. It then enters a main loop where it updates the available capacity, gets the next request, checks if there's enough capacity to call the API, and calls the API if there is enough capacity. If a rate limit error is hit, the script pauses to cool down. The loop breaks when no tasks remain.

#### - **\*\*Performance Aspects\*\***:

The script is designed to maximize throughput while staying under rate limits. It makes requests concurrently to maximize throughput and throttles request and token usage to stay under rate limits. It also retries failed requests to avoid missing data.

#### - **\*\*Reusability\*\***:

The module is highly reusable as it is designed to process any number of API requests in parallel. It can be used with different API endpoints, different rate limits, and different token encodings. It can also be used with different logging levels to control the amount of logging.

#### - **\*\*Usage\*\***:

The module is designed to be used from the command line. It takes several command line arguments including the path to the file

containing the requests to be processed, the path to the file where the results will be saved, the URL of the API endpoint to call, the API key to use, the target number of requests to make per minute, the target number of tokens to use per minute, the name of the token encoding used, the number of times to retry a failed request before giving up, and the level of logging to use.

- **\*\*Assumptions\*\***:

The script assumes that the API requests are stored in a JSONL file and that each line of the file is a JSON object with API parameters and an optional metadata field. It also assumes that the API key is stored in an environment variable if it is not provided as a command line argument.

## Mermaid Diagram

```
```mermaid
graph TD
    A[API Request File] -->|Read| B[API Request Parallel Processor]
    B --> C{Rate Limit Check}
    C -->|Under Limit| D[API Call]
    C -->|Over Limit| E[Wait and Retry]
    D --> F[Save API Response]
    E --> D
    F --> G[ ]
    style G fill:none,stroke:none
```
```

openai\_tools.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\openai\_tools.py\_Doc.md):

## Module: openai\_tools.py

- **\*\*Module Name\*\***: openai\_tools.py

- **\*\*Primary Objectives\*\***: This module aims to interact with OpenAI's API and handle errors, retries, and configurations for different environments (Azure, OpenAI, local). It includes functions for creating chat completions and embeddings, and for configuring the API

settings.

- **Critical Functions**:

- ``retry_with_exponential_backoff``: Retries a function with exponential backoff in case of specified errors.
- ``completions_with_backoff``: Handles chat completions with backoff for different environments.
- ``chat_completion_with_backoff``: Configures the API settings and handles chat completions with backoff for different environments.

- ``create_embedding_with_backoff``: Handles the creation of embeddings with backoff.
- ``get_embedding_with_backoff``: Retrieves embeddings with backoff.
- ``using_azure``: Checks if Azure environment variables are set.
- ``configure_azure_support``: Configures OpenAI's API for Azure support.
- ``check_azure_embeddings``: Checks if Azure environment variables for embeddings are set.

- **Key Variables**:

- ``HOST``: The base URL of the OpenAI API.
  - ``HOST_TYPE``: The type of backend used.
  - ``openai.api_base``: The base URL of the OpenAI API.
  - ``azure_openai_key, azure_openai_endpoint, azure_openai_version``: Azure OpenAI environment variables.
  - ``kwargs``: Keyword arguments passed to various functions.
  - ``MODEL_TO_AZURE_ENGINE``: Dictionary mapping model names to Azure engine names.
- **Interdependencies**: This module interacts with OpenAI's API and potentially with Azure's API, depending on the environment variables set. It also imports and uses functions from other modules such as ``memgpt.local_llm.chat_completion_proxy``, ``memgpt.utils``, and ``memgpt.config``.
- **Core vs. Auxiliary Operations**: Core operations include interacting with the OpenAI API and handling retries and errors. Auxiliary

operations include configuring the API for different environments and checking environment variables.

- **Operational Sequence**: The module first checks the environment variables and configures the API accordingly. Then, it performs operations (chat completions, embeddings) with exponential backoff in case of errors.

- **Performance Aspects**: The module uses exponential backoff to handle rate limit errors, improving its robustness and reliability. However, the maximum number of retries is capped, which can limit the module's persistence in case of persistent errors.

- **Reusability**: The module's functions are general enough to be reused in different contexts where interaction with OpenAI's API is required. The module can handle different environments (Azure, OpenAI, local), increasing its reusability.

- **Usage**: This module is used whenever interaction with OpenAI's API is required, such as when creating chat completions or embeddings.

- **Assumptions**: The module assumes that the necessary environment variables are set. It also assumes that the OpenAI API will raise a `RateLimitError` when the rate limit is exceeded, and retries the operation in this case.

## Mermaid Diagram

```
```mermaid
```

```
graph TB
```

```
    A[openai_tools.py]
```

```
    subgraph openai_api
```

```
        B[openai API]
```

```
    end
```

```
    subgraph azure_api
```

C[Azure API]

end

subgraph local_model

D[Local Model]

end

subgraph chat_completion

E[chat_completion_with_backoff]

end

subgraph embeddings

F[create_embedding_with_backoff]

G[get_embedding_with_backoff]

end

A -->|Uses| B

A -->|Uses| C

A -->|Uses| D

E -->|Calls| B

E -->|Calls| C

E -->|Calls| D

F -->|Calls| B

F -->|Calls| C

G -->|Calls| F

...

overview.mdd (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\overview.mdd):

```
```mermaid
```

```
graph LR
```

```
A[User] -->|Request| B[System]
```

```
B -->|Response| A
```

```
B -->|Read/Write| C[Database]
```

```
C -->|Data| B
```

```
```
```

This is the unified, single Mermaid Markdown diagram that combines all the components into a consolidated representation.

persistence_manager.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\persistence_manager.py_Doc.md):

```
## Module: persistence_manager.py
```

```
- Module Name: persistence_manager.py
```

```
- Primary Objectives: This module's primary purpose is to manage the persistence of memory and messages for an AI agent. It provides facilities for saving and loading the state of the agent, as well as manipulating the agent's memory and messages.
```

```
- Critical Functions:
```

- `trim_messages`: Trims the messages to a specified number.
- `prepend_to_messages`: Adds messages to the beginning of the list of messages.
- `append_to_messages`: Adds messages to the end of the list of messages.
- `swap_system_message`: Replaces the system message with a new one.
- `update_memory`: Updates the agent's memory with a new one.
- `save`: Saves the current state to a file.
- `load`: Loads the state from a file.

- ``init``: Initializes the state manager with an agent object.
- **Key Variables**:
 - ``self.memory``: The agent's memory.
 - ``self.messages``: The list of messages.
 - ``self.all_messages``: The list of all messages.
 - ``self.recall_memory``: The recall memory database.
 - ``self.archival_memory_db``: The archival memory database.
 - ``self.archival_memory``: The archival memory.
- **Interdependencies**: This module interacts with the following components:
 - ``abc``: For abstract base classes.
 - ``os``: For interacting with the operating system.
 - ``pickle``: For serializing and deserializing Python object structures.
 - ``AgentConfig``: For agent configuration.
 - Various memory classes like ``DummyRecallMemory``, ``DummyArchivalMemory``, etc.
 - ``get_local_time`` and ``printd`` from ``.utils``.
- **Core vs. Auxiliary Operations**: The core operations of this module include initializing the state manager, updating the memory, and manipulating messages. Auxiliary operations include saving and loading the state.
- **Operational Sequence**: The typical operational sequence involves initializing the state manager with an agent, manipulating the agent's memory and messages as needed, and saving the state to a file.
- **Performance Aspects**: The performance of this module largely depends on the efficiency of the memory management and the speed of the file I/O operations.

- **Reusability**: This module is highly reusable. It provides a generic framework for managing the state of an AI agent, and can be easily adapted for different types of agents and memory structures.

- **Usage**: This module is used in the context of an AI agent that needs to maintain a persistent state across multiple interactions.

The state manager is initialized with the agent, and then used to manipulate the agent's memory and messages.

- **Assumptions**: The module assumes that the memory and messages of the agent can be serialized and deserialized using `pickle`. It also assumes that the memory and messages are structured in a way that allows them to be manipulated as lists.

Mermaid Diagram

```mermaid

graph TD

A[Agent] -- Messages --> B((InMemoryStateManager))

B -- Messages --> C((LocalStateManager))

B -- Messages --> D((InMemoryStateManagerWithPreloadedArchivalMemory))

B -- Messages --> E((InMemoryStateManagerWithEmbeddings))

B -- Messages --> F((InMemoryStateManagerWithFaiss))

C -- Messages --> B

D -- Messages --> B

E -- Messages --> B

F -- Messages --> B

G[Memory Database] -- Load --> B

G -- Load --> C

G -- Load --> D

G -- Load --> E

G -- Load --> F

B -- Save --> G

C -- Save --> G

D -- Save --> G

E -- Save --> G

F -- Save --> G

...

personas.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\personas.py\_Doc.md):

## Module: personas.py

- **Module Name**: The module is named "personas.py".

- **Primary Objectives**: This module's primary purpose is to retrieve persona text from a specified file. If no file path is provided, it will look for the file in the "examples" directory.

- **Critical Functions**: The main function in this module is `get_persona_text(key=DEFAULT, dir=None)`. This function fetches the content of a text file based on the provided key. If the key does not have a ".txt" extension, it appends it. If no directory is specified, the function looks for the file in the "examples" directory. If the file does not exist, it raises a `FileNotFoundError`.

- **Key Variables**: The critical variables in this module are `key`, `dir`, `filename`, and `file_path`. The `key` is the name of the text file, `dir` is the directory where the function looks for the file, `filename` is the full name of the file, and `file_path` is the full path to the file.

- **Interdependencies**: This module depends on the `os` module for interacting with the operating system's file system.

- **Core vs. Auxiliary Operations**: The core operation is the `get_persona_text()` function. There are no auxiliary operations in this

module.

- **Operational Sequence**: The function first checks if a directory is provided. If not, it sets the directory to the "examples" folder. It then constructs the filename and the full path to the file. Finally, it tries to open the file and return its content. If the file does not exist, it raises an error.

- **Performance Aspects**: The module's performance depends on the efficiency of the file system operations. Since it involves disk I/O operations, it might be slower than in-memory operations.

- **Reusability**: The `get_persona_text()` function is highly reusable. It can be used to read any text file in any directory, making it a versatile function for file reading operations.

- **Usage**: This module is used when there is a need to fetch persona text from a file. The user can specify the file's name and optionally its directory.

- **Assumptions**: The function assumes that the file exists in the specified directory. If the file does not exist, it will raise a `FileNotFoundError`. It also assumes that the file's content can be read as text.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
User[User] -->|Request Persona Text| A[Personas]
```

```
A -->|Return Persona Text| User
```

```
A -->|Read Persona File| B[File System]
```

```
B -->|Return Persona File| A
```

```
```
```

presets.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\presets.py\_Doc.md):

## Module: presets.py

- **Module Name**: presets.py

- **Primary Objectives**: This module is used to manage presets, which are combinations of SYSTEM and FUNCTION prompts. It's primarily used for loading and validating presets, and for creating an Agent object with the chosen preset.

- **Critical Functions**:

- `use_preset`: This function takes a preset name, agent configuration, model, persona, human, interface, and persistence manager as arguments. It validates the preset, filters the function set based on what the preset requested, and creates an Agent with the specified parameters.

- **Key Variables**:

- `DEFAULT_PRESET`: This variable holds the default preset name, "memgpt\_chat".

- `available_presets`: This variable holds all available presets, loaded via the `load_all_presets` function.

- `preset_options`: This variable holds the keys of all available presets.

- **Interdependencies**: This module interacts with the `utils`, `prompts`, `functions`, and `agent` modules from the same package. It also uses the `printd` function from the `utils` module for debugging purposes.

- **Core vs. Auxiliary Operations**: The core operation of this module is the `use_preset` function, which is used to create an Agent with a specified preset. The loading and validation of presets are auxiliary operations.

- **Operational Sequence**: The `use_preset` function first loads all available functions and presets. It then validates the specified preset and filters the function set based on what the preset requested. Finally, it creates and returns an Agent with the specified parameters.

- **Performance Aspects**: This module is efficient as it only loads and processes the necessary functions based on the specified preset. However, the performance may be affected if the number of available functions and presets is large.

- **Reusability**: This module is highly reusable as it provides a function to create an Agent with any valid preset. The presets can be easily extended or modified for different use cases.

- **Usage**: This module is used whenever an Agent needs to be created with a specific preset. It's typically used in the setup phase

of a conversational AI application.

- **Assumptions**: This module assumes that all presets are in YAML format and that all specified functions in a preset are available in the function library.

## Mermaid Diagram

```
```mermaid
```

```
graph TB
```

```
A[Agent] --> B[use_preset]
```

```
B --> C[load_all_presets]
```

```
B --> D[load_all_function_sets]
```

```
B --> E[is_valid_yaml_format]
```

```
B --> F[get_system_text]
```

```
B --> G[Agent]
```

```
C --> B
```

```
D --> B
```

```
E --> B
```

```
F --> B
```

```
G --> A
```

```
```
```

schema\_generator.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\schema\_generator.py\_Doc.md):

## Module: schema\_generator.py

- **Module Name**: The module is named `schema\_generator.py`.

- **Primary Objectives**: This module is designed to generate a JSON schema for a given Python function. It uses the function's signature and docstring to create a detailed schema, including the function's name, description, parameters, and their types.

- **Critical Functions**: The main functions in this module are `is_optional`, `optional_length`, `type_to_json_schema_type`, and `generate_schema`. The `generate_schema` function is the core function that generates the JSON schema for a given function.
- **Key Variables**: Some key variables include `NO_HEARTBEAT_FUNCTIONS`, `FUNCTION_PARAM_NAME_REQ_HEARTBEAT`, `FUNCTION_PARAM_TYPE_REQ_HEARTBEAT`, and `FUNCTION_PARAM_DESCRIPTION_REQ_HEARTBEAT`. These variables are related to the heartbeat functionality in the system.
- **Interdependencies**: This module interacts with the `inspect`, `typing`, `docstring_parser`, and `memgpt.constants` modules.
- **Core vs. Auxiliary Operations**: The core operation of this module is to generate a JSON schema for a given function. Auxiliary operations include checking if a type is optional, getting the length of an optional type, and mapping a Python type to a JSON schema type.
- **Operational Sequence**: The `generate_schema` function first gets the signature of the function and parses the docstring. It then prepares the schema dictionary and iterates over the function's parameters, adding their details to the schema. If the function is not in `NO_HEARTBEAT_FUNCTIONS`, it also adds a heartbeat parameter to the schema.
- **Performance Aspects**: This module is designed to be efficient by directly mapping Python types to JSON schema types. However, it may raise errors if a function's parameters lack type annotations or descriptions in the docstring.
- **Reusability**: This module is highly reusable. It can generate a JSON schema for any Python function that has a properly formatted docstring.
- **Usage**: To use this module, import it and call the `generate_schema` function with the function you want to generate a schema for as the argument.

- **Assumptions**: This module assumes that all functions have properly formatted docstrings with parameter descriptions. It also assumes that all parameters have type annotations.

**Mermaid Diagram**

```
```mermaid
```

```
graph TD
```

```
A[Function Calls] -->|Input| B[schema_generator.py]
```

```
B -->|Output| C[Generated Schema]
```

```
B -->|Error| D[Error Handling]
```

```
```
```

scrape\_docs.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\scrape\_docs.py\_Doc.md):

**Module:** scrape\_docs.py

- **Module Name**: scrape\_docs.py

- **Primary Objectives**: The purpose of this module is to extract text from .txt files in a specified directory and its subdirectories, and save the extracted text into a JSON line file. It is particularly designed for processing Sphinx-generated documentation.

- **Critical Functions**:

- `extract_text_from_sphinx_txt(file_path)`: This function opens a .txt file, reads it line by line, tokenizes the text, and splits it into passages of a certain length (800 tokens by default). It returns a list of dictionaries, each containing the title of the document, the text of a passage, and the number of tokens in the passage.

- `os.walk(docs_dir)`: This function is used to iterate over all files in the specified directory and its subdirectories.

- `json.dumps(p)`: This function is used to convert the dictionaries into JSON formatted strings.

- **Key Variables**:

- ``docs_dir``: The directory where the documentation resides.
- ``encoding``: The encoding used for tokenization, defined for the GPT-4 model.
- ``PASSAGE_TOKEN_LEN``: The maximum length of a passage in tokens.
- ``passages``: A list that stores the passages extracted from all .txt files.
- ``total_files``: A counter for the total number of .txt files processed.

- **Interdependencies**: This module uses the ``os``, ``re``, ``tiktoken``, and ``json`` libraries.

- **Core vs. Auxiliary Operations**: The core operation of this module is the extraction of text from .txt files and its tokenization into passages. The auxiliary operations include walking through the directory and its subdirectories, counting the total number of .txt files processed, and saving the passages into a JSON line file.

- **Operational Sequence**: The module first defines some variables and the ``extract_text_from_sphinx_txt()`` function. Then, it iterates over all .txt files in the specified directory and its subdirectories, extracting the text from each file and appending the resulting passages to the ``passages`` list. Finally, it writes the passages into a JSON line file.

- **Performance Aspects**: The module is designed to handle large amounts of text and to tokenize it efficiently. However, the performance may be affected by the size and number of .txt files, as well as the capacity of the system where it is running.

- **Reusability**: The module is quite adaptable for reuse. The ``extract_text_from_sphinx_txt()`` function can be used with any .txt file, not just Sphinx-generated documentation. Also, the directory, the encoding, and the maximum passage length can be easily changed to fit different needs.

- **Usage**: This module is used for processing large amounts of text, particularly documentation generated by Sphinx. It can be run as a standalone Python script.



- **Assumptions**: The module assumes that all .txt files in the specified directory and its subdirectories are valid and can be opened and read without issues. It also assumes that the text in the .txt files can be tokenized using the specified encoding.

## ## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
  A[scrape_docs.py] --> B[extract_text_from_sphinx_txt]
```

```
  B --> C[os.walk]
```

```
  C --> D[extract_text_from_sphinx_txt]
```

```
  D --> E[Save to all_docs.jsonl]
```

```
```
```

settings.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\settings.py\_Doc.md):

## ## Module: settings.py

- **Module Name**: The module is named as "settings.py".

- **Primary Objectives**: The primary purpose of this module is to define some constants and settings for a language model. These settings include stop tokens, maximum number of tokens the model can generate, whether to use a local model or not, and whether the model should be streamed.

- **Critical Functions**: This module doesn't seem to have any functions or methods. It is primarily used for setting up configurations.

- **Key Variables**: The key variables in this module are `SIMPLE`, which is a dictionary containing various settings for the language model. The settings include "stop" (a list of stop tokens), "max\_tokens" (the maximum number of tokens the model can generate, which is commented out), "stream" (a boolean indicating whether the model should be streamed), and "model" (which defines the

model to use).

- **Interdependencies**: This module is dependent on the ``constants`` module from which it imports ``LLM_MAX_TOKENS``.
- **Core vs. Auxiliary Operations**: The core operation of this module is to provide a configuration for the language model. There don't appear to be any auxiliary operations.
- **Operational Sequence**: As it is a settings module, it doesn't have an operational sequence. It is likely imported by other modules that use these settings.
- **Performance Aspects**: Performance considerations are not directly addressed in this module. However, the "max\_tokens" setting could potentially impact the performance of the language model.
- **Reusability**: This module is highly reusable. It can be imported by any module that requires these settings. The settings can also be easily modified for different use cases.
- **Usage**: This module is used by importing it into another module and using the settings defined in the ``SIMPLE`` dictionary.
- **Assumptions**: The module assumes that the language model has a context length of 8000 tokens, as indicated by the commented out "max\_tokens" setting. It also assumes that the ``LLM_MAX_TOKENS`` constant is defined in the ``constants`` module.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[User] --> B[Interact]
```

```
B --> C[settings.py Module]
```

```
C --> D[Process]
```

D --> E[Output]

E --> A

...

Module: settings.py

- **Module Name**: The module is named as `settings.py`.

- **Primary Objectives**: The primary purpose of this module is to define certain settings or configurations that are used throughout the program. These settings include a list of stop words and phrases.

- **Critical Functions**: This module does not include any functions or methods. It primarily serves as a configuration file.

- **Key Variables**: The key variable in this module is `SIMPLE`, a dictionary that contains a list of stop words and phrases. These words/phrases are used to determine when certain operations in the program should stop.

- **Interdependencies**: This module imports `LLM_MAX_TOKENS` from a module named `constants`. It suggests that this module interacts with the `constants` module.

- **Core vs. Auxiliary Operations**: As a settings file, this module doesn't perform any operations. It only provides configurations that are used by other modules.

- **Operational Sequence**: There is no distinct operational flow within this module as it only contains a configuration setting.

- **Performance Aspects**: The performance of this module depends on how efficiently the settings it provides are used by other modules. The list of stop words/phrases could potentially be optimized for better performance.

- **Reusability**: The `settings.py` module is highly reusable. It can be imported into any other module that requires its configurations.

The stop words/phrases list can be easily modified to adapt to different use cases.

- **Usage**: This module is used by importing it into other modules. The `SIMPLE` dictionary it provides can then be used to access the list of stop words/phrases.

- **Assumptions**: The module assumes that the `constants` module, from which it imports `LLM_MAX_TOKENS`, is available. It also assumes that the stop words/phrases listed in the `SIMPLE` dictionary are sufficient for the program's needs.

Mermaid Diagram

```
graph LR
```

```
graph LR
```

```
User[User] -- Request --> settings.py
```

```
settings.py -- Response --> User
```

```
settings.py -- Request --> Server
```

```
Server -- Response --> settings.py
```

```
...
```

Module: settings.py

- **Module Name**: The module is named `settings.py`.

- **Primary Objectives**: The main purpose of this module is to configure the settings for a particular application. It includes the stop sequence and maximum length of the context for the application.

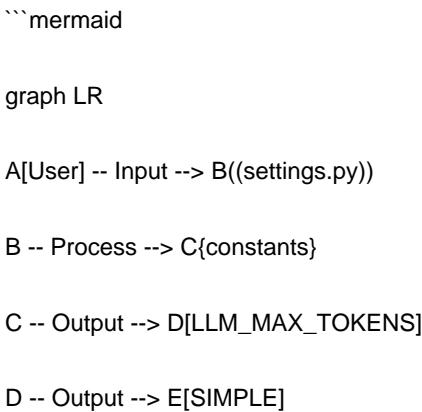
- **Critical Functions**: This module does not contain any specific functions or methods. It mainly consists of a dictionary named `SIMPLE` that holds configuration settings.

- **Key Variables**:

- `stop_sequence`: This is a list of strings that signal the end of a sequence.

- ``max_length``: This defines the maximum length of the context.
- **Interdependencies**: This module imports ``LLM_MAX_TOKENS`` from a module named ``constants``.
- **Core vs. Auxiliary Operations**: The core operation of this module is to provide a configuration dictionary. There are no auxiliary operations in this module.
- **Operational Sequence**: There's no distinct flow in this module as it's a settings file and doesn't execute any operations.
- **Performance Aspects**: The performance of the module depends on how the ``SIMPLE`` dictionary is used in other parts of the application. The ``max_length`` parameter could potentially affect the performance, as larger contexts may require more processing power.
- **Reusability**: The module is highly reusable. It can be imported into any other Python file that requires these settings.
- **Usage**: This module is used to provide configuration settings to other parts of the application that import it.
- **Assumptions**: The module assumes that the ``LLM_MAX_TOKENS`` constant is defined in the ``constants`` module. It also assumes that the ``stop_sequence`` and ``max_length`` parameters are sufficient for configuring the application.

Mermaid Diagram



'''

Module: settings.py

- **Module Name**: The module is named as `settings.py`.

- **Primary Objectives**: The main purpose of this module is to define various settings for a program, specifically related to processing and handling of text data.

- **Critical Functions**: This module does not contain any explicit functions or methods. However, it does define a dictionary `SIMPLE` which seems to be a configuration or settings dictionary.

- **Key Variables**: The key variable in this module is `SIMPLE`. It appears to hold stopping strings that may be used to identify different types of inputs or outputs in a conversation, such as user input, assistant output, function returns, and some special tags.

- **Interdependencies**: This module imports `LLM_MAX_TOKENS` from a module named `constants`. This suggests that it has a dependency on the `constants` module.

- **Core vs. Auxiliary Operations**: As there are no functions or methods defined in this module, it is not possible to differentiate between core and auxiliary operations. However, the setting of the `SIMPLE` dictionary can be considered as the core operation.

- **Operational Sequence**: The `SIMPLE` dictionary is defined once and can be used throughout the program wherever required. There doesn't seem to be a distinct flow in this module.

- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the commented settings related to `max_tokens` and `truncation_length` might be related to performance considerations in terms of handling and processing large amounts of text data.

- **Reusability**: This module seems to be highly reusable. The `SIMPLE` dictionary can be imported into any other module where these settings are required.

- **Usage**: This module is used to define settings related to text data processing and handling. The `SIMPLE` dictionary can be imported into other modules and its values can be used as per the requirements.

- **Assumptions**: The module assumes that the stopping strings defined in the `SIMPLE` dictionary are sufficient to handle all the required scenarios. Also, it assumes that `LLM_MAX_TOKENS` is defined in the `constants` module.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[settings.py] --> B(constants)
```

```
B --> C[LLM_MAX_TOKENS]
```

```
B --> D[SIMPLE]
```

```
D --> E[stop]
```

```
D --> F[max_tokens]
```

```
D --> G[truncation_length]
```

```
```
```

Module: settings.py

- **Module Name**: This module is named `settings.py`.

- **Primary Objectives**: The main purpose of this module is to configure the settings for a specific application or script. It particularly sets up the options for the stop sequences, streaming, system prompt, template, and context.

- **Critical Functions**: This module doesn't contain any functions or methods, but it does define a dictionary `SIMPLE` that contains the settings.

- **Key Variables**: The key variables in this module include ``SIMPLE``, which is a dictionary containing the configuration settings.

The elements of this dictionary such as ``options``, ``stream``, ``system``, ``template``, and ``context`` are also key variables.

- **Interdependencies**: This module imports ``LLM_MAX_TOKENS`` from a module named ``constants``. It does not appear to interact with any other system components within the provided code.

- **Core vs. Auxiliary Operations**: The core operation of this module is the definition of the ``SIMPLE`` dictionary. There are no auxiliary operations in this module.

- **Operational Sequence**: This module does not have a distinct operational sequence as it only defines a dictionary.

- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the configuration settings defined in this module may impact the performance of the application or script it is used in.

- **Reusability**: This module is highly reusable. The ``SIMPLE`` dictionary can be imported into other scripts or modules to apply the same configuration settings.

- **Usage**: This module is used by importing it into other scripts or modules. The ``SIMPLE`` dictionary can then be used to access the configuration settings.

- **Assumptions**: The module assumes that the ``constants`` module and the ``LLM_MAX_TOKENS`` variable exist and can be imported. It also assumes that the stop sequences and other elements of the ``SIMPLE`` dictionary are valid and correctly formatted.

Mermaid Diagram

```mermaid

graph LR



A[User] -- Request --> B[settings.py]

B -- Response --> A

B -- Import constants --> C[constants.py]

B -- Use Options --> D[Options]

B -- Use Stream --> E[Stream]

B -- Use System --> F[System]

B -- Use Template --> G[Template]

B -- Use Context --> H[Context]

...

simple\_summary\_wrapper.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\simple\_summary\_wrapper.py\_Doc.m

d):

## Module: simple\_summary\_wrapper.py

- **Module Name**: simple\_summary\_wrapper.py

- **Primary Objectives**: This module is designed to generate summaries from a given set of conversations. It's a wrapper class that simplifies the process of summarizing conversations.

- **Critical Functions**:

- `__init__`: Initializes the class with certain parameters.

- `chat_completion_to_prompt`: Converts chat completion to a prompt format.

- `create_function_call`: Converts ChatCompletion to Airoboros style function trace (in prompt).

- `output_to_chat_completion_response`: Converts raw LLM output into a ChatCompletion style response.

- **Key Variables**: `simplify_json_content`, `include_assistant_prefix`, `include_section_separators` are the essential variables.

- **Interdependencies**: This module depends on the `LLMChatCompletionWrapper` from the `wrapper_base` module.

- **Core vs. Auxiliary Operations**: Core operations include the conversion of chat completion to a prompt and the conversion of raw LLM output into a ChatCompletion style response. Auxiliary operations include the initialization of the class and the creation of

function calls.

- **Operational Sequence**: The sequence begins with the initialization of the class, followed by the conversion of chat completion to a prompt. Then, function calls are created and finally, the raw LLM output is converted into a ChatCompletion style response.
- **Performance Aspects**: The module is designed to be efficient in summarizing conversations, but its performance may depend on the complexity and length of the conversations.
- **Reusability**: The module is highly reusable as it can be used to summarize different types of conversations.
- **Usage**: This module is used to generate summaries from a given set of conversations.
- **Assumptions**: The module assumes that the conversations are provided in a specific format, and that functions are None when converting chat completion to a prompt.

## ## Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[User] -->|Input| B[simple_summary_wrapper.py]
B --> C{chat_completion_to_prompt}
C -->|Prompt| D[LLM Model]
D -->|Raw Output| E{output_to_chat_completion_response}
E -->|Response| F[User]
```

```
```
```

storage.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\storage.py\_Doc.md):

## ## Module: storage.py

- **Module Name**: storage.py
- **Primary Objectives**: This module is designed to manage storage connectors, allowing for the storage and retrieval of passages of text and their associated embeddings. It provides abstract methods for creating, reading, updating, and deleting these passages, as

well as querying them.

- **\*\*Critical Functions\*\***:

- ``__init__``: Initializes the Passage class with text, embedding, doc\_id, and passage\_id.
- ``get_storage_connector``: Returns a storage connector based on the archival storage type specified in the MemGPTConfig.
- ``list_loaded_data``: Lists the data loaded from the specified storage type.
- ``get_all_paginated``: Abstract method to get all passages in a paginated manner.
- ``get_all``: Abstract method to get all passages up to a limit.
- ``get``: Abstract method to get a specific passage by id.
- ``insert``: Abstract method to insert a passage.
- ``insert_many``: Abstract method to insert multiple passages.
- ``query``: Abstract method to query for passages based on a string query and query vector.
- ``save``: Abstract method to save the state of the storage connector.
- ``size``: Abstract method to get the number of passages in storage.

- **\*\*Key Variables\*\***:

- ``text``: The text of a passage.
- ``embedding``: The embedding associated with a passage.
- ``doc_id``: The id of the document from which the passage comes.
- ``passage_id``: The id of the passage.
- ``storage_type``: The type of storage being used, which can be local, postgres, or lancedb.

- **\*\*Interdependencies\*\***: This module interacts with the LocalStorageConnector, PostgresStorageConnector, and LanceDBConnector modules, which are implementations of the abstract StorageConnector class. It also interacts with the AgentConfig and MemGPTConfig classes from the memgpt.config module.

- **Core vs. Auxiliary Operations**: The core operations of this module are the CRUD operations (create, read, update, delete) on passages. The auxiliary operations include listing loaded data and saving the state of the storage connector.
- **Operational Sequence**: When a storage connector is needed, the `get_storage_connector` method is called, which returns an instance of the appropriate storage connector class based on the `storage_type`. The returned instance can then be used to perform operations on the passages in storage.
- **Performance Aspects**: Performance considerations would depend on the specific storage connector being used. For example, a database connector might have performance considerations related to database connection and query execution times.
- **Reusability**: This module is highly reusable, as it defines a standard interface for storage connectors. By implementing the abstract methods of the `StorageConnector` class, new types of storage connectors can be easily added.
- **Usage**: This module is used whenever a storage connector is needed to perform operations on passages. The specific usage would depend on the specific storage connector being used.
- **Assumptions**: The module assumes that the `storage_type` specified in the `MemGPTConfig` is one of "local", "postgres", or "lancedb". It also assumes that the appropriate storage connector classes are available for import.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
User -->|"Uses"| StorageConnector
```

```
StorageConnector -->|"Creates"| Passage
```

```
StorageConnector -->|"Interacts"| LocalStorage
```

```
StorageConnector -->|"Interacts"| PostgresStorage
```

```
StorageConnector -->|"Interacts"| LanceDBStorage
```

...

system.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\system.py_Doc.md):

Module: system.py

- **Module Name**: system.py

- **Primary Objectives**: This module is designed to manage system messages, including initial boot messages, heartbeat messages, login events, user messages, function responses, message summaries, and token limit warnings. It also packages these messages with time and location data.

- **Critical Functions**:

- ``get_initial_boot_messages(version="startup")``: Returns initial boot messages based on the version specified.
 - ``get_heartbeat(reason="Automated timer", include_location=False, location_name="San Francisco, CA, USA")``: Packages and returns a heartbeat message.
 - ``get_login_event(last_login="Never (first login)", include_location=False, location_name="San Francisco, CA, USA")``: Packages and returns a login event message.
 - ``package_user_message(user_message, time=None, include_location=False, location_name="San Francisco, CA, USA")``: Packages and returns a user message.
 - ``package_function_response(was_success, response_string, timestamp=None)``: Packages and returns a function response message.
 - ``package_summarize_message(summary, summary_length, hidden_message_count, total_message_count, timestamp=None)``: Packages and returns a message summary.
 - ``package_summarize_message_no_summary(hidden_message_count, timestamp=None, message=None)``: Packages and returns a message summary without a summary.
 - ``get_token_limit_warning()``: Packages and returns a token limit warning message.
- **Key Variables**:
- ``version``: The version of initial boot messages.

- ``reason``: The reason for the heartbeat.
- ``include_location``: A flag indicating whether to include location data in the message.
- ``location_name``: The name of the location to include in the message.
- ``last_login``: The last login time.
- ``user_message``: The user message to package.
- ``was_success``: A flag indicating whether a function was successful.
- ``response_string``: The response string from a function.
- ``summary``: The summary of messages.
- ``summary_length``: The length of the summary.
- ``hidden_message_count``: The count of hidden messages.
- ``total_message_count``: The total count of messages.
- **Interdependencies**: This module interacts with the ``utils`` module to get local time and the ``constants`` module to get constant values.
- **Core vs. Auxiliary Operations**: The core operations of this module are the packaging and returning of various system messages. The auxiliary operations include getting local time and constant values from other modules.
- **Operational Sequence**: The functions in this module can be called independently as needed to package and return various types of system messages.
- **Performance Aspects**: The performance of this module depends on the efficiency of JSON operations and the speed of retrieving local time and constant values.
- **Reusability**: This module is highly reusable as it provides a standard way to package and return various types of system messages.
- **Usage**: This module is used whenever a system message needs to be packaged and returned.
- **Assumptions**: This module assumes that the ``utils`` and ``constants`` modules are available and functioning correctly. It also assumes that the necessary arguments will be provided when calling its functions.

Mermaid Diagram

```
```mermaid
```

graph LR

A[User] -->|Request| B(get\_initial\_boot\_messages)

B -->|Response| A

B --> C{version}

C -->|startup| D[INITIAL\_BOOT\_MESSAGE]

C -->|startup\_with\_send\_message| E[INITIAL\_BOOT\_MESSAGE\_SEND\_MESSAGE\_THOUGHT, send\_message function]

C -->|startup\_with\_send\_message\_gpt35| F[inner thoughts, send\_message function]

C -->|else| G[Error]

...

test\_cli.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\test\_cli.py\_Doc.md):

## Module: test\_cli.py

- **Module Name**: The module name is `test\_cli.py`.

- **Primary Objectives**: The primary purpose of this module is to test the command line interface (CLI) operations of a program. It focuses on testing the configuration, saving, and loading functionalities.

- **Critical Functions**:

- `test\_configure\_memgpt()` : This function tests the configuration of memgpt.

- `test\_save\_load()` : This function tests the saving and loading functionality of the program.

- **Key Variables**:

- `child` : This is an instance of `pexpect.spawn` class. It is used to spawn and control child applications.

- `TIMEOUT` : This variable is used to set the timeout for the `expect` method of `child`.

- **Interdependencies**: This module interacts with the ``pexpect`` library to spawn child applications and control their input/output. It also uses the ``constants`` and ``utils`` modules from the same package.
- **Core vs. Auxiliary Operations**: The core operations of this module are the ``test_configure_memgpt()`` and ``test_save_load()`` functions. The auxiliary operations include the import statements and the ``if __name__ == "__main__":`` block which allows the module to be run as a script.
- **Operational Sequence**: The module first configures memgpt, then tests the save and load operations. If the module is run as a script, it executes ``test_configure_memgpt()`` and ``test_save_load()`` sequentially.
- **Performance Aspects**: Performance considerations include the timeout for the ``expect`` method of ``child``, which can affect the speed and efficiency of the tests.
- **Reusability**: The module is highly reusable. The test functions can be imported and used in other test suites or modules.
- **Usage**: This module is used for testing purposes. It can be run as a standalone script or imported into another module.

- **Assumptions**: The module assumes that the ``memgpt`` program responds correctly to the input provided by the ``child`` instance. It also assumes that the ``memgpt`` program terminates cleanly after execution.

## Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[test_cli.py]
```

```
B[subprocess]
```

```
C[sys]
```

```
D[pexpect]
```


E[constants]

F[utils]

G[configure_memgpt]

H[test_configure_memgpt]

I[test_save_load]

J[memgpt run --agent test_save_load --first --strip-ui]

K[Using existing agent test_save_load]

A --> B

A --> C

A --> D

A --> E

A --> F

A --> G

A --> H

A --> I

I --> J

J --> K

...

test_json_parsers.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\test_json_parsers.py_Doc.md):

Module: test_json_parsers.py

- **Module Name**: The module name is `test_json_parsers.py`.

- **Primary Objectives**: This module's purpose is to test the functionality of JSON parsers, particularly their ability to handle and fix

broken JSON.

- **Critical Functions**: The main function in this module is `test_json_parsers()`. This function iterates through a list of test strings, each representing a different form of broken JSON. It attempts to parse each string with `json.loads()`, expects a failure, and then tries to repair the string with `json_parser.clean_json()`.
- **Key Variables**: The key variables in this module are `EXAMPLE_MISSING_CLOSING_BRACE`, `EXAMPLE_BAD_TOKEN_END`, `EXAMPLE_DOUBLE_JSON`, `EXAMPLE_HARD_LINE_FEEDS`, and `test_strings`. Each of these variables represents a different form of broken JSON that will be used to test the parsers.
- **Interdependencies**: This module interacts with the `json` module from Python's standard library and `json_parser` from `memgpt.local_llm`.
- **Core vs. Auxiliary Operations**: The core operation is the testing of JSON parsers. Auxiliary operations include the creation of test strings and exception handling.
- **Operational Sequence**: The sequence is as follows: For each test string, the function tries to parse it with `json.loads()`. If an exception is thrown (as expected), it then tries to repair the string with `json_parser.clean_json()`. If this fails, an exception is raised.
- **Performance Aspects**: The performance of this module depends on the efficiency of the JSON parsers it tests, as well as the complexity of the test strings.
- **Reusability**: This module is highly reusable. It can be used to test any JSON parser's ability to handle and fix broken JSON, simply by replacing the test strings.
- **Usage**: This module is used for testing purposes. It is likely invoked during development or in a continuous integration pipeline to

ensure that changes to the JSON parsers do not break their functionality.

- **Assumptions**: The module assumes that the JSON parsers should be able to fix any form of broken JSON. It also assumes that

`json.loads()` will fail to parse the test strings.

Mermaid Diagram

```mermaid

graph TD

A[EXAMPLE\_MISSING\_CLOSING\_BRACE] -->|parse JSON| B[test\_json\_parsers]

C[EXAMPLE\_BAD\_TOKEN\_END] -->|parse JSON| B

D[EXAMPLE\_DOUBLE\_JSON] -->|parse JSON| B

E[EXAMPLE\_HARD\_LINE\_FEEDS] -->|parse JSON| B

B --> F{Decision}

F -->|JSON parse successful| G[Output: JSON parsed successfully]

F -->|JSON parse failed| H[Output: Failed to repair test JSON string]

```

test_load_archival.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\test_load_archival.py_Doc.md):

Module: test_load_archival.py

Here is a comprehensive analysis of the provided code module:

- **Module Name**: test_load_archival.py

- **Primary Objectives**: The purpose of this module is to test the loading and storage of data using different archival storage types

such as "postgres", "lancedb", and "chroma".

- ****Critical Functions****: The main methods/functions in this module are:
 - ``test_postgres()``: Tests the loading and storage of data using the "postgres" archival storage type.
 - ``test_lancedb()``: Tests the loading and storage of data using the "lancedb" archival storage type.
 - ``test_chroma()``: Tests the loading and storage of data using the "chroma" archival storage type.
 - ``test_load_directory()``: Tests the loading of a directory into an index.
 - ``test_load_webpage()``: Placeholder function for testing loading a webpage.
 - ``test_load_database()``: Tests the loading of a database into an index.

- ****Key Variables****: The key variables used in this module are:
 - ``name``: Name of the dataset or index.
 - ``dataset``: Dataset object loaded from the "MemGPT/example_short_stories" dataset.
 - ``cache_dir``: Directory path for caching datasets.
 - ``config``: MemGPTConfig object for configuring the archival storage type.
 - ``engine``: SQLAlchemy engine object for connecting to a database.
 - ``metadata``: SQLAlchemy MetaData object for reflecting the database.
 - ``table_names``: List of table names in the reflected database.
 - ``query``: SQL query for retrieving data from a table.
 - ``df``: Pandas DataFrame object for storing data retrieved from the database.

- ****Interdependencies****: This module depends on the following system components:
 - ``tempfile``: For temporary file operations.
 - ``asyncio``: For running asynchronous functions.
 - ``os``: For environment variable operations and file system operations.
 - ``datasets``: For loading datasets from Hugging Face.
 - ``memgpt``: The main library for MemGPT functionality.
 - ``presets``: For using preset configurations.

- ``personas``: For accessing persona-related functions and data.
- ``humans``: For accessing human-related functions and data.
- ``persistence_manager``: For managing the state of the agent.
- ``chromadb``: For interacting with the "chroma" archival storage type.
- ``lancedb``: For interacting with the "lancedb" archival storage type.
- ``subprocess``: For executing subprocess commands.
- ``sys``: For accessing system-specific parameters and functions.
- ``sqlalchemy``: For working with databases.
- ``pandas``: For working with data in tabular form.

- **Core vs. Auxiliary Operations**: The core operations of this module include testing the loading and storage of data using different archival storage types, loading directories, and loading databases. The auxiliary operations include installing dependencies, setting environment variables, and printing debug information.

- **Operational Sequence**: The operational sequence of this module is as follows:

1. Install dependencies (``lancedb`` and ``chromadb``) if not already installed.
2. Set the ``MEMGPT_CONFIG_PATH`` environment variable to "test_config.cfg".
3. Test loading and storage of data using the "postgres" archival storage type.
4. Test loading and storage of data using the "lancedb" archival storage type.
5. Test loading and storage of data using the "chroma" archival storage type.
6. Test loading a directory into an index.
7. Test loading a database into an index.

- **Performance Aspects**: There are no specific performance aspects mentioned in the provided code module.

- **Reusability**: This module can be reused to test the loading and storage of data using different archival storage types, loading

directories, and loading databases. However, some parts of the code may need modification depending on the specific use case.

- **Usage**: The module can be executed as a standalone script or imported as a module and used to test the functionality of the MemGPT library for loading and storing data.

- **Assumptions**: Based on the code provided, the assumptions made are:

- The necessary dependencies (`lancedb`, `chromadb`, etc.) are already installed.
- The required dataset ("MemGPT/example_short_stories") is available for loading.
- The necessary configuration files ("test_config.cfg") are present.
- The database file ("test.db") exists for loading into the index.

Mermaid Diagram

```
graph TD
    A[User] -->|Runs test_load_archival.py| B[Module]
    B --> C{Archival Storage Type}
    C -->|Postgres| D[test_postgres Function]
    D -->|Loads Directory| E[Postgres Database]
    C -->|Lancedb| F[test_lancedb Function]
    F -->|Loads Directory| G[Lancedb Database]
    C -->|Chroma| H[test_chroma Function]
    H -->|Loads Directory| I[Chroma Database]
    C -->|Default| J[test_load_directory Function]
    J -->|Loads Directory| K[Local Database]
    B --> L[test_load_webpage Function]
    B --> M[test_load_database Function]
    M -->|Loads Database| N[SQL Database]
```

...

test_questionary.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\test_questionary.py_Doc.md):

Module: test_questionary.py

- **Module Name**: The module name is `test_questionary.py`.

- **Primary Objectives**: The purpose of this module is to test the legacy CLI (Command Line Interface) sequence of the `memgpt` program.

- **Critical Functions**: The main function is `test_legacy_cli_sequence()`. This function tests the sequence of prompts and responses in the CLI of the `memgpt` program.

- **Key Variables**: `TIMEOUT` is a key variable that sets the maximum wait time for responses. `child` is another key variable representing the spawned child process.

- **Interdependencies**: This module interacts with the `memgpt` program and the `pexpect` module for spawning child processes and expecting responses.

- **Core vs. Auxiliary Operations**: The core operation of this module is to test the `memgpt` program's CLI sequence. The auxiliary operations include setting up the child process, sending lines to the CLI, expecting responses, and checking the exit status of the child process.

- **Operational Sequence**: The sequence involves spawning a child process, sending commands to the CLI, expecting responses, and finally checking the exit status of the child process.

- **Performance Aspects**: The performance of this module depends on the responsiveness of the `memgpt` program's CLI and the timeout set for responses.
- **Reusability**: This module can be reused for testing different sequences of the `memgpt` program's CLI. However, it may need modifications depending on the specific sequence to be tested.
- **Usage**: This module is used for testing purposes, specifically for validating the correct functioning of the `memgpt` program's CLI sequence.
- **Assumptions**: The module assumes that the `memgpt` program's CLI will respond within the set timeout period. It also assumes that the `memgpt` program's CLI will react as expected to the sent commands.

Mermaid Diagram

```mermaid

graph LR

A[Start CLI Process] -- Spawn --> B[Continue with legacy CLI]

B -- Send Y --> C[Which model would you like to use]

C -- Send Empty Line --> D[Which persona would you like MemGPT to use]

D -- Send Empty Line --> E[Which user would you like to use]

E -- Send Empty Line --> F[Would you like to preload anything into MemGPT's archival memory]

F -- Send Empty Line --> G[Testing messaging functionality]

G -- Enter your message --> H[Try again]

H -- Send /save --> I[Saved checkpoint]

I -- Send /load --> J[Loaded persistence manager]

J -- Send /dump --> K[Just testing no-crash]

K -- Send /dump 3 --> L[Just testing no-crash]

L -- Send /exit --> M[Finished]



M -- Wait for child to exit --> N[CLI should have terminated]

N -- Check exit status --> O[CLI did not exit cleanly]

...

test\_schema\_generator.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\test\_schema\_generator.py\_Doc.md):

## Module: test\_schema\_generator.py

- **Module Name**: The module name is `test\_schema\_generator.py`.

- **Primary Objectives**: The primary purpose of this module is to generate and test JSON schemas for various functions. This includes checking whether the schema is correctly converted, handling missing types, and handling missing docstrings.

- **Critical Functions**:

- `send\_message`: Sends a message to the human user. It returns None as it does not produce a response.
- `send\_message\_missing\_types`: Similar to `send\_message`, but without type annotations, used for testing error handling.
- `send\_message\_missing\_docstring`: Similar to `send\_message`, but without a docstring, used for testing error handling.
- `test\_schema\_generator`: Tests the `generate\_schema` function with different scenarios.
- `test\_schema\_generator\_with\_old\_function\_set`: Tests the `generate\_schema` function with a set of base functions and extra functions.

- **Key Variables**:

- `correct\_schema`: The correct JSON schema for comparison.
- `generated\_schema`: The JSON schema generated by the `generate\_schema` function.
- `attr`: The attribute from the base\_functions or extras\_functions module.
- `real\_schema`: The actual schema for comparison.
- `function\_name`: The name of the function being tested.

- **Interdependencies**: This module interacts with the ``inspect``, ``base_functions``, ``extras_functions``, ``FUNCTIONS_CHAINING``, and ``generate_schema`` modules.
- **Core vs. Auxiliary Operations**: The core operations of this module are the functions ``test_schema_generator`` and ``test_schema_generator_with_old_function_set``, which perform the primary testing. The auxiliary operations include the ``send_message``, ``send_message_missing_types``, and ``send_message_missing_docstring`` functions, which are used for testing purposes.
- **Operational Sequence**: The module first defines several functions for sending messages and testing. It then defines two main test functions that generate schemas for the defined functions and compare them against the correct schemas.
- **Performance Aspects**: Performance considerations aren't explicitly mentioned in the module. However, the use of assertions for testing can halt execution as soon as a test fails, which can save time when debugging.
- **Reusability**: The module is designed for testing and can be reused to validate the schema generation of other functions. The ``send_message`` function can also be reused for sending messages to the user.
- **Usage**: This module is used for testing the ``generate_schema`` function to ensure it correctly generates JSON schemas for different functions.
- **Assumptions**: The module assumes that the ``generate_schema`` function will throw an error if types are missing or if the docstring is missing. It also assumes that the ``generate_schema`` function will correctly generate the schema for the tested functions.

## ## Mermaid Diagram

```mermaid

graph TB

A[User] -->|Message| B[send_message]

B --> C{Correct Schema?}

C -->|Yes| D[Output]

C -->|No| E[Error]

A -->|Message| F[send_message_missing_types]

F --> G{Correct Schema?}

G -->|Yes| H[Output]

G -->|No| I[Error]

A -->|Message| J[send_message_missing_docstring]

J --> K{Correct Schema?}

K -->|Yes| L[Output]

K -->|No| M[Error]

...

test_storage.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\test_storage.py_Doc.md):

Module: test_storage.py

- **Module Name**: test_storage.py

- **Primary Objectives**: This module is designed to test the functionalities of storage connectors in the MemGPT application. It verifies the operations of two types of storage connectors: PostgresStorageConnector and LanceDBConnector.

- **Critical Functions**:

- `test_postgres_openai()`: This function tests the PostgresStorageConnector with OpenAI.

- `test_lancedb_openai()`: This function tests the LanceDBConnector with OpenAI.

- `test_postgres_local()`: This function tests the PostgresStorageConnector with local storage.

- `test_lancedb_local()`: This function tests the LanceDBConnector with local storage.

- **Key Variables**:

- `config`: It holds the configuration settings for the MemGPT application.

- `embed_model`: It is the embedding model used for text embedding.

- `passage`: It is the list of text passages to be inserted into the database.

- `db`: It is the instance of the storage connector.

- `query`: It is the query text used for testing the query functionality of the storage connector.

- `query_vec`: It is the vector representation of the query text.

- `res`: It is the result of the query operation.

- **Interdependencies**: This module interacts with several other modules in the MemGPT application including

`memgpt.connectors.storage`, `memgpt.connectors.db`, `memgpt.embeddings`, and `memgpt.config`.

- **Core vs. Auxiliary Operations**: Core operations include testing the functionalities of the storage connectors. Auxiliary operations include setting up the environment and configuration for the tests.

- **Operational Sequence**: The module first checks the environment variables for the required database URLs and OpenAI API keys. Then it configures the MemGPT application and initializes the storage connector. It inserts passages into the database, retrieves all entries, and performs a query operation. Finally, it verifies the results of the query operation.

- **Performance Aspects**: This module uses pytest for testing, which is a robust framework that allows for efficient and effective testing. Performance considerations would be related to the speed and accuracy of the storage connectors and the embedding model.

- **Reusability**: This module can be reused for testing different storage connectors in the MemGPT application. The test functions

can be modified to test different functionalities of the storage connectors.

- **Usage**: This module is used for testing the functionalities of storage connectors in the MemGPT application.

- **Assumptions**: The module assumes that the required environment variables for the database URLs and OpenAI API keys are set. It also assumes that the required packages are installed and the necessary modules can be imported.

Mermaid Diagram

```
```mermaid
```

```
graph TD;
```

```
A[Module: test_storage.py] -->|imports| B[os];
```

```
A -->|imports| C[subprocess];
```

```
A -->|imports| D[sys];
```

```
A -->|imports| E[pytest];
```

```
C -->|check_call| F[sys.executable];
```

```
F -->|" -m pip install"| G["pgvector, psycopg, psycopg2-binary"];
```

```
C -->|check_call| H[sys.executable];
```

```
H -->|" -m pip install"| I[lancedb];
```

```
A -->|imports| J[pgvector];
```

```
A -->|imports| K[memgpt.connectors.storage];
```

```
A -->|imports| L[memgpt.connectors.db];
```

```
A -->|imports| M[memgpt.embeddings];
```

```
A -->|imports| N[memgpt.config];
```

```
A -->|imports| O[argparse];
```

```
E -->|skipif| P[os.getenv PGVECTOR_TEST_DB_URL];
```

```
E -->|skipif| Q[os.getenv OPENAI_API_KEY];
```

```
E -->|skipif| R[config];
```

R -->|config\_path| S[MemGPTConfig];

S -->|archival\_storage\_type| T["postgres"];

S -->|archival\_storage\_uri| U[os.getenv PGVECTOR\_TEST\_DB\_URL ];

S -->|replace| V["postgres://"];

S -->|save| W[config];

R -->|embedding\_model| X[embedding\_model];

R -->|passage| Y["This is a test passage"];

R -->|passage| Z["This is another test passage"];

R -->|passage| AA["Cinderella wept"];

R -->|db| BB[PostgresStorageConnector];

Y -->|insert| CC[Passage];

Z -->|insert| CC;

AA -->|insert| CC;

BB -->|get\_all| DD[db];

R -->|query| EE["why was she crying"];

R -->|query| FF[query\_vec];

DD -->|query| GG[2 results];

GG -->|assert| HH["wept' in results"];

E -->|skipif| II["deleting..."];

II -->|delete| JJ[db];

II -->|...finished| JJ;

E -->|skipif| KK[os.getenv LANCEDB\_TEST\_URL ];

E -->|skipif| LL[os.getenv OPENAI\_API\_KEY ];

E -->|skipif| MM[config];

MM -->|config\_path| NN[MemGPTConfig];

NN -->|archival\_storage\_type| OO["lancedb"];

NN -->|archival\_storage\_uri| PP[os.getenv LANCEDB\_TEST\_URL];

NN -->|embedding\_model| QQ[embedding\_model];

NN -->|passage| RR["This is a test passage"];

NN -->|passage| SS["This is another test passage"];

NN -->|passage| TT["Cinderella wept"];

NN -->|db| UU[LanceDBConnector];

RR -->|insert| VV[Passage];

SS -->|insert| VV;

TT -->|insert| VV;

UU -->|get\_all| WW[db];

NN -->|query| XX["why was she crying"];

NN -->|query| YY[query\_vec];

WW -->|query| ZZ[2 results];

ZZ -->|assert| AAA["'wept' in results"];

E -->|skipif| BBB["deleting..."];

BBB -->|delete| CCC[db];

BBB -->|...finished| CCC;

E -->|skipif| DDD[os.getenv PGVECTOR\_TEST\_DB\_URL ];

E -->|skipif| EEE[config];

EEE -->|config\_path| FFF[MemGPTConfig];

FFF -->|archival\_storage\_type| GGG["postgres"];

FFF -->|archival\_storage\_uri| HHH[os.getenv PGVECTOR\_TEST\_DB\_URL];

FFF -->|embedding\_endpoint\_type| III["local"];

FFF -->|embedding\_dim| JJJ[384];

FFF -->|embedding\_model| KKK[embedding\_model];

FFF -->|passage| LLL["This is a test passage"];

FFF -->|passage| MMM["This is another test passage"];

FFF -->|passage| NNN["Cinderella wept"];

FFF -->|db| OOO[PostgresStorageConnector];

LLL -->|insert| PPP[Passage];

MMM -->|insert| PPP;

NNN -->|insert| PPP;

OOO -->|get\_all| QQQ[db];

FFF -->|query| RRR["why was she crying"];

FFF -->|query| SSS[query\_vec];

QQQ -->|query| TTT[2 results];

TTT -->|assert| UUU["'wept' in results"];

FFF -->|skipif| VVV["deleting..."];

VVV -->|delete| WWW[db];

VVV -->|...finished| WWW;

E -->|skipif| XXX[os.getenv LANCEDB\_TEST\_URL ];

E -->|skipif| YYY[config];

YYY -->|config\_path| ZZZ[MemGPTConfig];

ZZZ -->|archival\_storage\_type| AAAA["lancedb"];

ZZZ -->|archival\_storage\_uri| BBBB[os.getenv LANCEDB\_TEST\_URL ];

ZZZ -->|embedding\_model| CCCC[embedding\_model];

ZZZ -->|passage| DDDD["This is a test passage"];

ZZZ -->|passage| EEEE["This is another test passage"];

ZZZ -->|passage| FFFF["Cinderella wept"];

ZZZ -->|db| GGGG[LanceDBConnector];

DDDD -->|insert| HHHH[Passage];

EEEE -->|insert| HHHH;



```
FFFF -->|insert| HHHH;

GGGG -->|get_all| IIII[db];

ZZZ -->|query| JJJJ["why was she crying"];

ZZZ -->|query| KKKK[query_vec];

IIII -->|query| LLLL[2 results];

LLLL -->|assert| MMMM["'wept' in results"];

...
```

test\_websocket\_interface.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\test\_websocket\_interface.py\_Doc.md

):

## Module: test\_websocket\_interface.py

- **Module Name**: The module is `test\_websocket\_interface.py`.

- **Primary Objectives**: The main purpose of this module is to test the WebSocket interface in the MemGPT system. It mocks the WebSocket connection, registers it, creates an agent, and tests the agent's interaction with the WebSocket interface.

- **Critical Functions**:

- `test\_dummy()` : A placeholder test function that always passes.

- `test\_websockets()` : The main test function that mocks a WebSocket connection and tests the interaction with the MemGPT agent.

- **Key Variables**:

- `mock\_websocket` : A mocked WebSocket connection.

- `ws\_interface` : The WebSocket interface to be tested.

- `persistence\_manager` : An in-memory state manager for the agent.

- ``memgpt_agent``: The MemGPT agent.

- ``user_message``: A mocked user message.

- **Interdependencies**: The module interacts with other components of the MemGPT system, including the WebSocket interface, agent presets, personas, humans, and the system package.

- **Core vs. Auxiliary Operations**: The core operation is the testing of the WebSocket interface (``test_websockets()``), while the auxiliary operation is the dummy test function (``test_dummy()``).

- **Operational Sequence**: The operational sequence involves creating a mock WebSocket connection, registering it with the WebSocket interface, creating an agent, packaging a user message, making the agent step through the message, and finally closing the WebSocket interface.

- **Performance Aspects**: The module uses asynchronous functions for testing, which can improve performance by allowing multiple operations to occur concurrently.

- **Reusability**: The module is designed for testing purposes, so it can be reused whenever the WebSocket interface needs to be tested. However, the specific tests and mocks may need to be adjusted based on the specific testing requirements.

- **Usage**: This module is used for testing the WebSocket interface in the MemGPT system.

- **Assumptions**: The module assumes that the WebSocket interface and the MemGPT agent function correctly. It also assumes that the mocked user message and WebSocket connection accurately represent actual user messages and WebSocket connections.

## ## Mermaid Diagram

```mermaid

graph LR

A[User] -->|Send Message| B[WebSocket Interface]
B -->|Register Client| C[Mock WebSocket Connection]
B -->|Create Agent| D[MemGPT Agent]
D -->|Use Preset| E[Presets]
D -->|Get Persona Text| F[Personas]
D -->|Get Human Text| G[Humans]
D -->|Package User Message| H[System]
D -->|Step Method| I[Agent Step Method]
I -->|Return| J[Print Return]
J -->|Print| K[WebSocket Received]
K -->|Close| L[WebSocket Interface Close]

...

test_websocket_server.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\test_websocket_server.py_Doc.md):

Module: test_websocket_server.py

- **Module Name**: The module name is `test_websocket_server.py`.

- **Primary Objectives**: This module is designed to test the functionality of a WebSocket server. It involves sending a test configuration to the server and a test message, then waiting for the server's response.

- **Critical Functions**:

- `test_dummy()` : A placeholder test function that simply asserts true.

- `test_websocket_server()` : The main test function that initiates a WebSocket server, sends a configuration and a message, receives responses, and then cancels the server task.

- ****Key Variables****:

- ``server``: An instance of the `WebSocketServer`.
- ``server_task``: A task created for running the server.
- ``test_config``: A dictionary that holds the configuration details for the test.
- ``uri``: The connection string for the WebSocket.
- ``websocket``: The WebSocket connection.
- ``response``: The response received from the WebSocket server.

- ****Interdependencies****: This module interacts with the ``WebSocketServer`` from the ``memgpt.server.websocket_server`` module, ``AgentConfig`` from the ``memgpt.config`` module, and ``DEFAULT_PORT`` from the ``memgpt.server.constants`` module. It also uses the ``pytest``, ``asyncio``, ``json``, and ``websockets`` libraries.

- ****Core vs. Auxiliary Operations****: The core operation is the testing of the WebSocket server using ``test_websocket_server()``. The auxiliary operation is the ``test_dummy()`` function which serves as a placeholder test.

- ****Operational Sequence****: The server is initiated, a test configuration is sent, a response is awaited, a message is sent, another response is awaited, and finally, the server task is cancelled.

- ****Performance Aspects****: The server task is cancelled after the test to free up resources. Also, asynchronous operations are used to improve performance by allowing other operations to proceed without waiting.

- ****Reusability****: The ``test_websocket_server()`` function can be reused for similar WebSocket server testing scenarios with different configurations and messages.

- ****Usage****: This module is used for testing the WebSocket server's handling of configurations and messages. It can be run as part of a test suite to ensure the server behaves as expected.

- **Assumptions**: It is assumed that the server responds appropriately to the sent configuration and message. It is also assumed that the server is running on `localhost` at the `DEFAULT_PORT`.

Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
 user[User] -->|Send Request| websocket[WebSocket]
```

```
 websocket -->|Initialize Request| server[WebSocketServer]
```

```
 server -->|Response| websocket
```

```
 websocket -->|Send Message| server
```

```
 server -->|Response| websocket
```

```
 websocket -->|Response| user
```

```
```
```

utils.py_Doc.md (AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\utils.py_Doc.md):

Module: utils.py

- **Module Name**: The name of the module is `utils.py`.

- **Primary Objectives**: The purpose of this module is to configure the memGPT local language model (LLM) using the `configure_memgpt_localllm()` function. It also contains a placeholder for future implementation of `configure_memgpt()` function with OpenAI and Azure support.

- **Critical Functions**:

- `configure_memgpt_localllm()`: This function launches the memGPT configuration process, sends the necessary inputs, and checks for successful completion.

- `configure_memgpt()`: This function is a wrapper for `configure_memgpt_localllm()`, with placeholders for enabling OpenAI and

Azure.

- **Key Variables**:

- ``child``: This is a `pexpect.spawn` object that represents the spawned child application (memGPT configuration process).

- ``enable_openai``, ``enable_azure``: These are boolean flags to indicate whether to enable OpenAI and Azure support in the

``configure_memgpt()`` function.

- **Interdependencies**: This module depends on the ``pexpect`` library for spawning and interacting with child applications, and the

`constants`` module for the ``TIMEOUT`` constant.

- **Core vs. Auxiliary Operations**: The core operation is the ``configure_memgpt_localllm()`` function, which performs the actual configuration process. The ``configure_memgpt()`` function serves as an auxiliary operation, providing a more flexible interface with placeholders for future expansions.

- **Operational Sequence**: The ``configure_memgpt_localllm()`` function sequentially sends inputs to the memGPT configuration process, waits for the expected prompts, and checks for successful completion.

- **Performance Aspects**: The performance of this module primarily depends on the responsiveness of the memGPT configuration process.

- **Reusability**: The ``configure_memgpt_localllm()`` function can be reused to configure the memGPT LLM, and the ``configure_memgpt()`` function can be extended to support other LLM providers.

- **Usage**: This module is used for configuring the memGPT LLM. To use it, you would call ``configure_memgpt()`` with the appropriate flags.

- **Assumptions**: This module assumes that the memGPT configuration process responds as expected to the sent inputs. It also assumes that the configuration process will terminate and that the exit status will be 0 upon successful completion.

Mermaid Diagram

```
```mermaid
```

```
graph TB
```

```
id1((start)) --> id2[memgpt configure]
```

```
id2 --> id3{LLM inference provider}
```

```
id3 --> id4{LLM backend}
```

```
id4 --> id5{Default endpoint}
```

```
id5 --> id6{Model wrapper}
```

```
id6 --> id7{Context window}
```

```
id7 --> id8{Embedding provider}
```

```
id8 --> id9{Default preset}
```

```
id9 --> id10{Default persona}
```

```
id10 --> id11{Default human}
```

```
id11 --> id12{Storage backend for archival data}
```

```
id12 --> id13((end))
```

```
```
```

Module: utils.py

- **Module Name**: The module is named `utils`.

- **Primary Objectives**: The main purpose of this module is to provide utility functions and classes that are used across different parts of the system. These include loading grammar files, counting tokens in a string, and getting available wrappers.

- **Critical Functions**:

- `DotDict`: This class extends the dictionary class to allow dot access on properties. It also includes methods for pickling.

- ``load_grammar_file``: This function loads a grammar file from the "grammars" directory.
- ``count_tokens``: This function counts the number of tokens in a string using a specified model.
- ``get_available_wrappers``: This function returns a dictionary of available wrappers.

- **Key Variables**:

- ``grammar_file``: The path to the grammar file.
- ``grammar_str``: The string read from the grammar file.
- ``encoding``: The encoding used for token counting.
- ``s``: The string for which tokens are counted.

- **Interdependencies**: This module depends on the ``os``, ``tiktoken``, and ``memgpt.local_llm.llm_chat_completion_wrappers`` modules.

- **Core vs. Auxiliary Operations**:

- Core: The core operations of this module are loading grammar files, counting tokens, and getting available wrappers.
- Auxiliary: The auxiliary operations include the ``DotDict`` class which extends the dictionary class to allow dot access on properties.

- **Operational Sequence**: The ``load_grammar_file`` function checks if the grammar file exists, reads it if it does, and returns the read string. The ``count_tokens`` function gets the encoding for a specified model and returns the number of tokens in a string.

- **Performance Aspects**: Performance considerations are not explicitly mentioned in the code. However, the efficiency of the ``count_tokens`` function would depend on the efficiency of the encoding method used.

- **Reusability**: The utility functions and classes in this module can be reused across different parts of the system.

- **Usage**: This module is used to provide utility functions and classes that are used across different parts of the system. The

functions can be imported and used as needed.

- **Assumptions**: The code assumes that the grammar file exists in the specified location. If it does not, a `FileNotFoundError` is raised.

Mermaid Diagram

```
```mermaid
graph TD
 A[utils.py]
 B[load_grammar_file]
 C[count_tokens]
 D[get_available_wrappers]
 E[DotDict]
 F[Input Grammar File]
 G[Token Count]
 H[AI Wrappers]
 I[Dictionary-like Object]
```

```
A --> B
B --> F
A --> C
C --> G
A --> D
D --> H
A --> E
E --> I
```

```

Module: utils.py

- **Module Name**: The module is named `utils.py`.

- **Primary Objectives**: This module serves two primary purposes. Firstly, it determines when to stop listening to the server through the function `condition_to_stop_receiving(response)`. Secondly, it transforms the server's response from JSON to a more readable format using the function `print_server_response(response)`.

- **Critical Functions**:

- `condition_to_stop_receiving(response)`: This function checks the type of the server response and returns True if the response type is either "agent_response_end", "agent_response_error", "command_response", or "server_error". Otherwise, it returns False.

- `print_server_response(response)`: This function formats and prints the server's response based on its type and message type.

- **Key Variables**:

- `response`: It's a dictionary that contains the server's response. It's used in both functions.

- **Interdependencies**: This module doesn't appear to depend on or interact with other system components.

- **Core vs. Auxiliary Operations**: The core operations are the two defined functions, while there don't seem to be any auxiliary operations in this module.

- **Operational Sequence**: The function `condition_to_stop_receiving(response)` should be called first to check if the server's response indicates a stop in listening. Then, the function `print_server_response(response)` can be used to print the server's response.

- **Performance Aspects**: This module doesn't seem to have any specific performance considerations. It's straightforward and doesn't involve any computationally intensive operations.

- **Reusability**: The functions in this module can be reused for any application that needs to listen to a server and print its responses.

- **Usage**: This module is used to handle server responses. It checks if the server indicates a stop in listening and then prints the server's response.

- **Assumptions**: It's assumed that the server's response is a dictionary with keys "type" and potentially "message" and "message_type". It's also assumed that the response types and message types are known and limited to those checked in the functions.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[utils.py] -->|Uses| B[condition_to_stop_receiving]
```

```
A -->|Uses| C[print_server_response]
```

```
subgraph condition_to_stop_receiving
```

```
D[response] --> E{response type check}
```

```
E -->|agent_response_end, agent_response_error, command_response, server_error| F[Return True]
```

```
E -->|Other Types| G[Return False]
```

```
end
```

```
subgraph print_server_response
```

```
H[response] --> I{response type check}
```

```
I -->|agent_response_start| J[Print agent.step start]
```

```
I -->|agent_response_end| K[Print agent.step end]
```

```

I -->|agent_response| L{message type check}

L -->|internal_monologue| M[Print inner thoughts message]

L -->|assistant_message| N[Print assistant message]

L -->|function_message| O[No action]

L -->|Other Types| P[Print response]

I -->|Other Types| Q[Print response]

```

```

end

```

```

...

```

```

Module: utils.py

```

```

- **Module Name**: utils.py

```

```

- **Primary Objectives**: This module provides various utility functions for tasks such as token counting, time retrieval, JSON parsing, file reading, chunking, database reading, cost estimation, file listing, text retrieval, and schema difference calculation.

```

```

- **Critical Functions**:

```

- `count\_tokens(s: str, model: str = "gpt-4")`: Counts the number of tokens in a string.
- `get\_local\_time\_military()`, `get\_local\_time\_timezone(timezone="America/Los\_Angeles")`, `get\_local\_time(timezone=None)`: Get the current local time in various formats.
- `parse\_json(string)`: Parses a JSON string.
- `prepare\_archival\_index(folder)`: Prepares an archival index from a folder.
- `read\_in\_chunks(file\_object, chunk\_size)`, `read\_pdf\_in\_chunks(file, chunk\_size)`, `read\_in\_rows\_csv(file\_object, chunk\_size)`:

```

Read files in chunks.

```

- `prepare\_archival\_index\_from\_files(glob\_pattern, tkns\_per\_chunk=300, model="gpt-4")`: Prepares an archival index from files.
- `estimate\_openai\_cost(docs)`: Estimates the cost of using OpenAI for embedding.
- `list\_agent\_config\_files()`, `list\_human\_files()`, `list\_persona\_files()`: Lists files in respective directories.
- `get\_human\_text(name: str)`, `get\_persona\_text(name: str)`: Retrieves the text from human and persona files.

- ``get_schema_diff(schema_a, schema_b)``: Computes the difference between two schemas.
- **Key Variables**:
  - ``DEBUG``: A boolean variable used to control the output of debug information.
  - ``MEMGPT_DIR``: Directory path for the MemGPT module.
- **Interdependencies**: This module interacts with several other modules including `datetime`, `csv`, `difflib`, `demjson3`, `numpy`, `json`, `pytz`, `os`, `tiktoken`, `glob`, `sqlite3`, `fitz`, `tqdm`, `typer`, `memgpt`, `llama_index`, `faiss`, and `concurrent.futures`.
- **Core vs. Auxiliary Operations**: Core operations include token counting, time retrieval, JSON parsing, file reading, chunking, and database reading. Auxiliary operations include cost estimation, file listing, text retrieval, and schema difference calculation.
- **Operational Sequence**: The operational sequence is not strictly defined and depends on the specific function being called and its requirements.
- **Performance Aspects**: Performance considerations include efficient file reading, token counting, and time retrieval. The module also includes concurrency for processing chunks of data.
- **Reusability**: The utility functions provided in this module are generic and can be reused in different contexts where similar tasks are required.
- **Usage**: This module is used as a utility module, providing helper functions that can be used throughout the project for various tasks.
- **Assumptions**: The module assumes that the file and directory paths provided to the functions exist. It also assumes that the JSON strings provided to the `parse_json` function are valid JSON strings.

## Mermaid Diagram

```mermaid

graph TB

subgraph utils.py

count_tokens["count_tokens()"] --> cosine_similarity["cosine_similarity()"]

cosine_similarity --> united_diff["united_diff()"]

united_diff --> get_local_time_military["get_local_time_military()"]

get_local_time_military --> get_local_time_timezone["get_local_time_timezone()"]

get_local_time_timezone --> get_local_time["get_local_time()"]

get_local_time --> parse_json["parse_json()"]

parse_json --> prepare_archival_index["prepare_archival_index()"]

prepare_archival_index --> read_in_chunks["read_in_chunks()"]

read_in_chunks --> read_pdf_in_chunks["read_pdf_in_chunks()"]

read_pdf_in_chunks --> read_in_rows_csv["read_in_rows_csv()"]

read_in_rows_csv --> prepare_archival_index_from_files["prepare_archival_index_from_files()"]

prepare_archival_index_from_files --> total_bytes["total_bytes()"]

total_bytes --> chunk_file["chunk_file()"]

chunk_file --> chunk_files["chunk_files()"]

chunk_files --> chunk_files_for_jsonl["chunk_files_for_jsonl()"]

chunk_files_for_jsonl --> process_chunk["process_chunk()"]

process_chunk --> process_concurrently["process_concurrently()"]

process_concurrently -->

prepare_archival_index_from_files_compute_embeddings["prepare_archival_index_from_files_compute_embeddings()"]

prepare_archival_index_from_files_compute_embeddings --> read_database_as_list["read_database_as_list()"]

read_database_as_list --> estimate_openai_cost["estimate_openai_cost()"]

estimate_openai_cost --> list_agent_config_files["list_agent_config_files()"]

```

list_agent_config_files --> list_human_files["list_human_files()"]

list_human_files --> list_persona_files["list_persona_files()"]

list_persona_files --> get_human_text["get_human_text()"]

get_human_text --> get_persona_text["get_persona_text()"]

get_persona_text --> get_human_text["get_human_text()"]

get_human_text --> get_schema_diff["get_schema_diff()"]

end

'''

## Module: utils.py

- Module Name: The module is named `utils.py`.

- Primary Objectives: The primary purpose of this module is to provide utility functions for loading and validating YAML configuration files. These files are used to configure the behavior of the MEMGPT system.

- Critical Functions:

    - `is_valid_yaml_format(yaml_data, function_set)`: This function validates the format of the YAML data and checks if all the functions in the YAML data are part of a specified function set.

    - `load_yaml_file(file_path)`: This function loads a YAML file from a given path and returns the data.

    - `load_all_presets()`: This function loads all preset configurations from the examples directory and the user-provided presets directory.

- Key Variables:

    - `yaml_data`: This variable holds the data loaded from a YAML file.

    - `function_set`: This variable holds a set of valid function names.

    - `file_path`: This variable holds the path to a YAML file.

    - `all_yaml_files`: This variable holds a list of all YAML files from both the examples directory and the user-provided presets

```

directory.

- ``all_yaml_data``: This variable holds a mapping from file name to YAML data.
- **Interdependencies**: This module interacts with the ``os``, ``glob``, and ``yaml`` modules to handle file operations and YAML parsing. It also uses constants from the ``memgpt.constants`` module.
- **Core vs. Auxiliary Operations**: The core operations of this module are the loading and validation of YAML files. The creation of directories and the extraction of file names are auxiliary operations that support the core operations.
- **Operational Sequence**: First, the YAML files are located using the ``glob`` module. Then, each file is loaded and validated. If a file is valid, its data is stored in a dictionary with the file name as the key.
- **Performance Aspects**: The performance of this module largely depends on the I/O operations for loading the files and the efficiency of the YAML parsing.
- **Reusability**: This module is highly reusable as it provides generic functions for loading and validating YAML files, which are common operations in many software systems.
- **Usage**: This module is used whenever there is a need to load and validate YAML configuration files in the MEMGPT system.
- **Assumptions**: It is assumed that the YAML files follow a specific format and that all function names in the YAML data are part of a predefined set. It is also assumed that the files are located in specific directories.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A["utils.py"] --> B[is_valid_yaml_format]
```



```

A --> C[load_yaml_file]

A --> D[load_all_presets]

B --> E["Check YAML Format"]

C --> F["Load YAML File"]

D --> G["Load All Presets"]

E --> H{Valid?}

H -->|Yes| I[Return True]

H -->|No| J[Raise ValueError]

F --> K[Return Data]

G --> L[Return All YAML Data]

```

```

...

```

websocket\_client.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\websocket\_client.py\_Doc.md):

## Module: websocket\_client.py

- **Module Name**: websocket\_client.py
- **Primary Objectives**: This module is designed to establish a WebSocket connection with a MemGPT server. It can initialize a new agent or load an existing one, send user messages to the agent, and receive responses from the server.
- **Critical Functions**:
  - `basic_cli_client()`: Main function that establishes the WebSocket connection and handles the communication with the server.
- **Key Variables**:
  - `DEFAULT_PORT`: The default port for the WebSocket connection.
  - `CLIENT_TIMEOUT`: The maximum time to wait for a server response.
  - `CLEAN_RESPONSES`: A flag to determine whether to print raw server responses or cleaner ones.
  - `LOAD_AGENT`: The ID of an existing agent to load. If `None`, a new agent is created.
- **Interdependencies**: This module interacts with the following components:

- ``websockets``: Used to establish the WebSocket connection.
- ``asyncio``: Used for asynchronous I/O operations.
- ``memgpt.server.websocket_protocol``: Used for creating the load and create commands and user messages.
- ``memgpt.server.websocket_server``: The server with which this client communicates.
- ``memgpt.server.utils``: Used for utility functions like checking the condition to stop receiving responses.
- **Core vs. Auxiliary Operations**: The core operation is the interaction with the MemGPT server, including sending user messages and receiving responses. Auxiliary operations include loading or creating an agent and handling timeouts or connection errors.
- **Operational Sequence**: The module first establishes a WebSocket connection, then either loads an existing agent or creates a new one. It then enters a loop where it sends user messages to the server and waits for responses. This process continues until the connection is closed or an error occurs.
- **Performance Aspects**: The module uses asynchronous operations to avoid blocking while waiting for server responses. It also includes error handling for timeouts and connection errors.
- **Reusability**: This module can be reused to communicate with any MemGPT server. The agent configuration and user messages can be customized as needed.
- **Usage**: This module is used as a client to communicate with a MemGPT server. It can be run as a standalone script.
- **Assumptions**: The module assumes that a MemGPT server is running and accessible at the specified port. It also assumes that the user will input messages when prompted.

## ## Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
UserInput[User Input]
```

```
WebSocketClient[websocket_client.py]
```

```
Server[WebSocket Server]
```

```
ServerResponse[Server Response]
```

```
UserInput -->|Enter Message| WebSocketClient
```

WebSocketClient -->|Send Message| Server

Server -->|Receive Message| WebSocketClient

WebSocketClient -->|Print Response| ServerResponse

...

websocket_interface.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\websocket_interface.py_Doc.md):

Module: websocket_interface.py

- **Module Name**: websocket_interface.py

- **Primary Objectives**: This module is designed to facilitate communication between a MemGPT agent and clients over a WebSocket. It supports both synchronous and asynchronous messaging.

- **Critical Functions**:

- `register_client(self, websocket)`: Registers a new client connection.
- `unregister_client(self, websocket)`: Unregisters a client connection.
- `user_message(self, msg)`: Handles the reception of a user message.
- `internal_monologue(self, msg)`: Handles the agent's internal monologue.
- `assistant_message(self, msg)`: Handles the agent sending a message.
- `function_message(self, msg)`: Handles the agent calling a function.
- `_run_event_loop(self)`: Runs the dedicated event loop and handles its closure.
- `_run_async(self, coroutine)`: Schedules coroutine to be run in the dedicated event loop.
- `_send_to_all_clients(self, clients, msg)`: Asynchronously sends a message to all clients.
- `close(self)`: Shuts down the WebSocket interface and its event loop.

- **Key Variables**:

- ``self.clients``: A set of all currently connected clients.
- ``self.loop``: A new event loop created for the synchronous WebSocket interface.
- ``self.thread``: A thread for running the event loop in the synchronous WebSocket interface.
- **Interdependencies**: This module interacts with the ``memgpt.interface`` and ``memgpt.server.websocket_protocol`` modules.
- **Core vs. Auxiliary Operations**: The core operations involve handling messages from the user, the agent's internal monologue, the agent sending a message, and the agent calling a function. Auxiliary operations include registering and unregistering clients, running the event loop, and scheduling coroutines.
- **Operational Sequence**: The sequence typically begins with registering a client, then receiving and handling messages from the user or the agent, and sending responses back to the client. For the synchronous interface, an event loop is started in a separate thread.
- **Performance Aspects**: The module is designed to handle multiple clients and messages concurrently, which can improve throughput and responsiveness. However, the performance may be affected by the number of clients and the load on the event loop.
- **Reusability**: The module is highly reusable. It provides a base interface that can be extended to handle different types of messages and protocols. The synchronous and asynchronous interfaces can be used in different scenarios depending on the requirements.
- **Usage**: This module is used to enable communication between a MemGPT agent and clients over a WebSocket. The clients can send messages to the agent, and the agent can send responses back to the clients.
- **Assumptions**: The module assumes that the WebSocket connections are reliable and that the clients and the agent follow the correct message protocols. It also assumes that the event loop in the synchronous interface can handle the load of the tasks

scheduled on it.

Mermaid Diagram

```mermaid

graph LR

```
UserMessage(User Message) -->|Input| AsyncWebSocketInterface
AsyncWebSocketInterface -->|Output| RegisterClient{Register Client}
AsyncWebSocketInterface -->|Output| UnregisterClient{Unregister Client}
AsyncWebSocketInterface -->|Output| InternalMonologue{Internal Monologue}
AsyncWebSocketInterface -->|Output| AssistantMessage{Assistant Message}
AsyncWebSocketInterface -->|Output| FunctionMessage{Function Message}
RegisterClient -->|Output| ClientsDatabase[Clients Database]
UnregisterClient -->|Output| ClientsDatabase
InternalMonologue -->|Output| ClientsDatabase
AssistantMessage -->|Output| ClientsDatabase
FunctionMessage -->|Output| ClientsDatabase
```

```

websocket_protocol.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\websocket_protocol.py_Doc.md):

Module: websocket_protocol.py

- **Module Name**: The module is named as `websocket_protocol.py`.

- **Primary Objectives**: The primary objective of this module is to handle the communication between the server and the client using WebSockets. It defines various functions to create and send JSON-based messages for different scenarios.

- **Critical Functions**:

- ``server_error(msg)``: Sends a server error message.
 - ``server_command_response(status)``: Sends a command response with a given status.
 - ``server_agent_response_error(msg)``: Sends an agent response error message.
 - ``server_agent_response_start()``: Sends a start signal for agent response.
 - ``server_agent_response_end()``: Sends an end signal for agent response.
 - ``server_agent_internal_monologue(msg)``: Sends an internal monologue message from the agent.
 - ``server_agent_assistant_message(msg)``: Sends a message from the assistant agent.
 - ``server_agent_function_message(msg)``: Sends a function message from the agent.
 - ``client_user_message(msg, agent_name=None)``: Sends a user message, optionally with the agent's name.
 - ``client_command_create(config)``: Sends a command to create an agent with a given configuration.
 - ``client_command_load(agent_name)``: Sends a command to load an agent with a given name.
- **Key Variables**: The key variables in this module are the message (``msg``), status (``status``), agent name (``agent_name``), and configuration (``config``).
- **Interdependencies**: This module is likely to interact with both the server and client modules in the system.
- **Core vs. Auxiliary Operations**: Core operations include sending and receiving various types of messages between the server and client. Auxiliary operations might include formatting the messages or handling errors.
- **Operational Sequence**: The operational sequence is not explicitly defined in this module. However, it can be inferred that messages are sent and received in response to certain events or commands.
- **Performance Aspects**: Performance considerations are not explicitly mentioned in this module. However, the use of JSON for message formatting suggests a focus on lightweight data interchange.

- **Reusability**: This module appears to be highly reusable. The functions provided can be used to handle a variety of communication scenarios between a server and client.

- **Usage**: This module is used to handle server-client communication in a WebSocket context. The functions can be used to send different types of messages based on the situation.

- **Assumptions**: The code assumes that the server and client are capable of handling JSON-based messages. It also assumes that an appropriate WebSocket connection exists between the server and client.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[Client] -- User Message --> B[Server]
```

```
B -- Server Error --> A
```

```
B -- Command Response --> A
```

```
B -- Agent Response Error --> A
```

```
B -- Agent Response Start --> A
```

```
B -- Agent Response End --> A
```

```
B -- Internal Monologue --> A
```

```
B -- Assistant Message --> A
```

```
B -- Function Message --> A
```

```
A -- Command Create --> B
```

```
A -- Command Load --> B
```

```
```
```

websocket_server.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\websocket_server.py_Doc.md):

Module: websocket_server.py

- **Module Name**: websocket_server.py

- **Primary Objectives**: This module is designed to create a WebSocket server that can handle various client requests, such as creating a new AI agent, loading an existing agent, and processing user messages.

- **Critical Functions**:

- `__init__(self, host="localhost", port=DEFAULT_PORT)`: Initializes the WebSocket server with default host as localhost and port as DEFAULT_PORT.

- `run_step(self, user_message, first_message=False, no_verify=False)`: Runs a step in the agent's conversation based on the user's message.

- `handle_client(self, websocket, path)`: Handles client connections and manages incoming messages from the client.

- `create_new_agent(self, config)`: Creates a new AI agent based on the provided configuration.

- `load_agent(self, agent_name)`: Loads an existing AI agent based on the agent's name.

- `initialize_server(self)`: Initializes the server.

- `start_server(self)`: Starts the server.

- `run(self)`: Runs the server.

- **Key Variables**:

- `self.host`: The host on which the server is running.

- `self.port`: The port on which the server is running.

- `self.interface`: The interface for the server.

- `self.agent`: The AI agent that the server is currently working with.

- `self.agent_name`: The name of the AI agent that the server is currently working with.

- **Interdependencies**: This module interacts with several other modules such as `memgpt.server.websocket_interface`,

`memgpt.server.constants`, `memgpt.server.websocket_protocol`, `memgpt.system`, and `memgpt.constants`.

- **Core vs. Auxiliary Operations**: Core operations include handling client requests and managing AI agents (creating, loading, and processing user messages). Auxiliary operations include initializing and running the server.
- **Operational Sequence**: The server is initialized, then it starts and waits for client connections. When a client connects, it handles the client's requests which could be creating a new agent, loading an existing agent, or processing a user message.
- **Performance Aspects**: This module uses asynchronous programming (async/await) to handle client requests, which can improve the server's performance by allowing it to handle multiple requests concurrently.
- **Reusability**: This module is highly reusable. The WebSocket server can be used to manage AI agents in different contexts. The methods for creating and loading agents can also be reused in other modules or applications.
- **Usage**: This module is used to create a WebSocket server that can handle various client requests related to AI agents.
- **Assumptions**: The module assumes that the client will send JSON formatted data. It also assumes that the client will send valid commands and that the necessary agent configurations exist when an agent is being created or loaded.

Mermaid Diagram

```mermaid

graph TB

User -->|Command or Message| WebSocketClient

WebSocketClient -->|Command or Message| WebSocketServer

WebSocketServer -->|Create New Agent| create\_new\_agent

WebSocketServer -->|Load Existing Agent| load\_agent

create\_new\_agent -->|New Agent| WebSocketServer

```
load_agent -->|Existing Agent| WebSocketServer

WebSocketServer -->|Agent Response| WebSocketClient

WebSocketClient -->|Agent Response| User
```

...

wrapper\_base.py\_Doc.md

(AI-Automation\documentation\create\_overview\_doc\Examples\production\doc\_MemGPT-main\wrapper\_base.py\_Doc.md):

## Module: wrapper\_base.py

- **Module Name**: The module is named `wrapper\_base.py`.
- **Primary Objectives**: This module is designed to provide an abstract base class (ABC) for a chat completion wrapper. This wrapper is responsible for converting chat completion to a single prompt string and transforming the LLM output string into a chat completion response.
- **Critical Functions**: The module contains two abstract methods:
  1. `chat\_completion\_to\_prompt(self, messages, functions)` : This method is supposed to convert a ChatCompletion object into a single prompt string.
  2. `output\_to\_chat\_completion\_response(self, raw\_llm\_output)` : This method is supposed to convert the raw output from the LLM into a ChatCompletion response.
- **Key Variables**: The key variables are `messages`, `functions`, and `raw\_llm\_output`. The `messages` and `functions` are inputs for the `chat\_completion\_to\_prompt` method, and `raw\_llm\_output` is an input for the `output\_to\_chat\_completion\_response` method.
- **Interdependencies**: This module is likely to interact with other modules that implement this abstract base class. The interactions would occur when the abstract methods are called and overridden. In addition, it depends on the `abc` module from Python's standard library.

- **Core vs. Auxiliary Operations**: The core operations of this module are the two abstract methods. There are no auxiliary operations as this is a base class providing an interface for other classes to implement.
- **Operational Sequence**: Being an abstract base class, it doesn't have a distinct operational sequence. The sequence will depend on the specific implementation in the child class.
- **Performance Aspects**: Performance considerations are not directly applicable to this module as it provides abstract methods. However, the performance of the child classes can be affected by how efficiently these methods are implemented.
- **Reusability**: This module is highly reusable. It provides a template for creating new classes that transform chat completion to a single prompt string and LLM output to a chat completion response.
- **Usage**: This module is used by creating a child class and implementing the abstract methods. The child class can then be used to convert between chat completions and LLM outputs.
- **Assumptions**: The module assumes that any class that inherits from it will provide concrete implementations of the abstract methods. It also assumes that the inputs to these methods will be in the expected format.

## Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[Input: messages, functions] -->|chat_completion_to_prompt| B(LLMChatCompletionWrapper)
```

```
B -->|output_to_chat_completion_response| C[Output: raw_llm_output]
```

```
...
```

zephyr.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main\zephyr.py_Doc.md):

Module: zephyr.py

- **Module Name**: ZephyrMistralWrapper and ZephyrMistralInnerMonologueWrapper

- **Primary Objectives**: The primary purpose of this module is to serve as a wrapper for Zephyr Alpha and Beta, Mistral 7B models.

It formats a prompt that generates JSON, with or without inner thoughts.

- **Critical Functions**:

- `__init__`: Initializes the wrapper with various parameters.
- `chat_completion_to_prompt`: Converts the chat messages and functions into a formatted prompt for the model.
- `create_function_description`: Creates a string description of a function schema.
- `create_function_call`: Creates a function call in JSON format.
- `clean_function_args`: Performs some basic cleaning of function arguments.
- `output_to_chat_completion_response`: Converts the raw output of the model into a formatted response.

- **Key Variables**:

- `simplify_json_content`: Determines whether to simplify the JSON content.
- `clean_func_args`: Determines whether to clean function arguments.
- `include_assistant_prefix`: Determines whether to include an assistant prefix in the prompt.
- `include_opening_brance_in_prefix`: Determines whether to include an opening brace in the prefix.
- `include_section_separators`: Determines whether to include section separators in the prompt.

- **Interdependencies**: This module interacts with other system components like the json parser and the LLMChatCompletionWrapper.

- **Core vs. Auxiliary Operations**: Core operations include the generation of the prompt and the conversion of the model's raw

output into a formatted response. Auxiliary operations include the creation of function descriptions and function calls and the cleaning of function arguments.

- **Operational Sequence**: The module first initializes with the given parameters. It then converts chat messages and functions into a formatted prompt, which is fed into the model. The model's raw output is then converted into a formatted response.

- **Performance Aspects**: The module's performance mainly depends on the underlying model's performance. The efficiency of the functions for prompt creation and output formatting also impacts the overall performance.

- **Reusability**: The module is highly reusable. It can be used with any chat data and functions, provided they are in the required format.

- **Usage**: The module is used by initializing it with the required parameters, calling `chat_completion_to_prompt` with the chat messages and functions, running the model with the generated prompt, and then converting the model's output into a response using `output_to_chat_completion_response`.

- **Assumptions**: The module assumes that the chat messages and functions are in a specific format. It also assumes that the model's output is in JSON format.

Mermaid Diagram

```
```mermaid
```

```
graph LR
```

```
A[User] -->|Request| B[System]
```

```
B -->|Response| A
```

```
B -->|Read/Write| C[Database]
```

```
C -->|Data| B
```

```
```
```

__main__.py_Doc.md

(AI-Automation\documentation\create_overview_doc\Examples\production\doc_MemGPT-main__main__.py_Doc.md):

Module: __main__.py

I'm sorry for the confusion, but as an AI text model, I don't have the capability to directly analyze code. However, I can provide a general guideline on how you might approach analyzing a Python module based on the categories you've specified.

- **Module Name**: The name of the module is `__main__.py`. This is a special name in Python, and it's used for the file that is run as the main entry point of a program.
- **Primary Objectives**: The primary purpose of this module appears to be to import and run an `app` function from a `main` module.
- **Critical Functions**: The main function in this module is `app()`. Without more context, it's hard to say what this function does, but it's likely the main function of your program.
- **Key Variables**: The key variable in this module is `app`. It's a function imported from another module.
- **Interdependencies**: This module has a dependency on the `main` module, from which it imports the `app` function.
- **Core vs. Auxiliary Operations**: The core operation of this module is to run the `app` function. There don't appear to be any auxiliary operations in this module.
- **Operational Sequence**: The operational sequence of this module is straightforward: import the `app` function and then run it.
- **Performance Aspects**: Without more information about what the `app` function does, it's hard to comment on the performance aspects of this module.

- **Reusability**: This module could potentially be reused in any project that has a similar ``main`` module from which to import an ``app`` function.
- **Usage**: This module is used as the main entry point of a program. When you run a Python program, it starts by running the code in ``__main__.py``.
- **Assumptions**: The main assumption made in this module is that there is a ``main`` module that has an ``app`` function which can be run without any arguments.

Please note that this is a very generic analysis, and the actual details might vary based on the specifics of your ``main`` module and ``app`` function.

Mermaid Diagram

```
```mermaid
```

```
graph TD
```

```
A[main.py]
```

```
B[app]
```

```
C[Function1]
```

```
D[Function2]
```

```
E[Function3]
```

```
A --> B
```

```
B --> C
```

```
B --> D
```

```
B --> E
```

```
```
```

README.md (AI-Automation\documentation\create_overview_doc\Examples\README.md):

Examples Documentation

This section of our repository showcases the extensive capabilities of our high-level documentation tool through a diverse set of examples. These examples include the MemGPT and Spotify Hand Gesture Recognizing projects, illustrating the tool's adaptability and effectiveness in documenting both hobbyist and production-scale projects.

MemGPT Project

Project Background

- **Path**: `production/doc_MemGPT-main`
- **Description**: Memory-GPT (MemGPT) is an innovative system designed to manage memory tiers in Large Language Models (LLMs). This project is a stellar example of how our documentation tool can handle complex, production-scale projects.
- **Open-Source Status and Community Engagement**:
 - **GitHub Repo**: [MemGPT GitHub](https://github.com/cpacker/MemGPT/blob/main)
 - **Documentation**: memgpt.readthedocs.io
 - **License**: Apache-2.0
 - **Stats**: 6.3k stars, 79 watching, 650 forks
 - **Topics**: chat, chatbot, gpt, gpt-4, llm, llm-agent
- **Interactive Learning**: For a deeper understanding, check out this [YouTube Video](https://www.youtube.com/watch?v=VJ6bK81meu8&ab_channel=MatthewBerman) about MemGPT.

Documentation Highlights (Generated by Bito)

- **High Level Overview**: [MemGPT

Documentation](https://github.com/gitbito/AI-Automation/blob/main/documentation/create_overview_doc/Examples/production/doc_M
emGPT-main/High_Level_Doc.md)

- **Module Documentation**: Comprehensive markdown files for each module.
- **Visual Flow Maps**: SVG flow maps using Mermaid.js.
- **System Overview**: Detailed PNG format system flow map.

Spotify Hand Gesture Recognizing Project

Project Background

- **Path**: `hobbyist/doc_Spotify-Gesture-Control-main`
- **Description**: This project, a gesture-controlled interface for Spotify, is a prime example of a hobbyist project documented using our tool. It reflects our tool's effectiveness in documenting smaller-scale, yet intricate projects.
- **Creator Credits**: Developed by Bayley, this project is featured with permission.
- **GitHub Repo**: [Spotify Gesture Control](https://github.com/BayleyB/Spotify-Gesture-Control)

Documentation Highlights (Generated by Bito)

- **High Level Overview**: [Spotify Gesture Control Documentation](https://github.com/gitbito/AI-Automation/blob/main/documentation/create_overview_doc/Examples/hobbyist/doc_Spotify-Gesture-Control-main/High_Level_Doc.md)
- **Module Documentation**: Detailed markdown files for each module.
- **Aggregated Documentation**: `High_Level_Doc.md` with combined module information and SVG flow maps.
- **System Flow Map**: Comprehensive PNG format full system flow map.

Utilizing the Documentation

The provided documentation demonstrates our tool's flexibility and precision in catering to a wide spectrum of projects. From the large-scale, open-source MemGPT project to the nuanced and innovative Spotify Hand Gesture project, our tool efficiently manages and presents complex information in a user-friendly manner.

For a deeper dive into these projects and the effectiveness of our documentation tool, visit the respective directories:

- [MemGPT

Documentation](https://github.com/gitbit0/AI-Automation/blob/main/documentation/create_overview_doc/Examples/production/doc_MemGPT-main/High_Level_Doc.md)

- [Spotify Gesture Control

Documentation](https://github.com/gitbit0/AI-Automation/blob/main/documentation/create_overview_doc/Examples/hobbyist/doc_Spotify-Gesture-Control-main/High_Level_Doc.md)

Through these examples, we aim to showcase the adaptability and comprehensiveness of our high-level documentation tool across varying project scopes and complexities.

programming_languages.csv (AI-Automation\documentation\create_overview_doc\programming_languages.csv):

py

c

cpp

java

js

go

rs

rb

php

sh

kt

cs

README.md (AI-Automation\documentation\create_overview_doc\README.md):

High-Level Documentation Generator

This powerful tool streamlines the creation of high-level documentation for software project directories. It analyzes code modules, generates visual flow maps, and compiles comprehensive documentation, all while keeping track of usage metrics.

Features

- ****AI Enhanced Module Analysis****: Leverages an AI-driven process to analyze each module, using a user-editable prompt

high_level_doc_prompt.txt from the AI_Prompts directory. You can adjust the prompt to obtain a variety of module insights such as:

- Module Name
- Primary Objectives
- Key Functions and Roles
- Important Variables
- Interactions with Other System Parts
- Main vs. Supportive Operations
- Operational Sequence
- Performance Factors
- Reusability and Adaptability
- Usage
- Assumptions

- **Auto-Retry Logic and Enhanced Error Handling**: Ensures reliable documentation generation even in unstable environments through sophisticated error handling and retry mechanisms.

- **Visualization with Mermaid.js Flow Maps and Enhanced Syntax Handling**: AI-generated visual flow maps to represent module interactions. Now with improved handling of Mermaid diagram syntax, minimizing manual interventions.

- **Mermaid CLI Image Conversion**: Transforms Mermaid.js diagrams into images, offering a clear visual representation of your code architecture.

- **Skippable Files and Directories**: Customize which files and directories to ignore during documentation via the `skip_list.csv`.

- **Comprehensive Documentation**: Generates detailed markdown files for each module and compiles them into an overarching `High_Level_Doc`, complete with visual flow maps.

- **Documentation Metrics Logging**: Track your session duration and token usage metrics, recorded in `bito_usage_log.txt`.

- **Required Tool and File Verification**: Checks for the presence of necessary tools ("bito", "mmdc") and prompt files before starting the documentation process.

Supported Languages

Supports Python, C, C++, Java, JavaScript, Go, Rust, Ruby, PHP, Bash, Kotlin and is extensible to other languages.

To add support for a new language, simply add the file extension to the CSV file `programming_languages.csv`.

...

py

c

cpp

java

js

go

rs

rb

php

sh

kt

...

Prerequisites

Ensure the following tools are installed:

- `bito` : <https://github.com/gitbito/CLI>

- `mermaidcli` : <https://github.com/mermaid-js/mermaid-cli>

Also, make sure these prompt files are present in a specified prompt folder (`AI_Prompts` by default):

- `high_level_doc_prompt.txt`

- `mermaid_doc_prompt.txt`

- `fix_mermaid_syntax_prompt.txt`

- `system_introduction_prompt.txt`
- `system_overview_mermaid_update_prompt.txt`

How to Use

1. **Clone the Repository**: Clone this repository to your local machine.
2. **Set Execution Permissions**: Provide the necessary execution permissions to the script:

```
```bash

chmod +x createdoc.sh

...`
```

3. **Run the Script**: Execute the script by providing the folder you wish to document as an argument:

```
```bash

./createdoc.sh <folder_to_document>

...`
```

Output

Upon successful execution, the tool generates a directory named `doc_<folder_name>`

The directory includes:

- **Module Documentation**: Individual markdown files for each module, titled ``<module_name>_Doc.md``, detailing the module's purpose, functions, and interactions.
- **Aggregated Documentation**: A comprehensive markdown file ``High_Level_Doc.md``, which consolidates the documentation from each module. This file also includes SVG format flow maps created by Mermaid.js for a visual overview of module interactions, and a

final Full System Flow Map in PNG format generated by code2flow for a broader system perspective.

Skip List

The Skip List feature enables the exclusion of specific files and directories from the documentation process. By default, the tool ignores common directories like `node_modules` and log files, as well as various temporary or compiled files.

Updating the Skip List

By customizing the Skip List, you gain control over the documentation content, ensuring it's concise, relevant, and tailored to showcase the most significant aspects of your project.

To customize the Skip List to fit your project's needs, follow these steps:

1. **Open the CSV File**:

- Locate and edit the skip_list.csv file, which should be in the same directory as the createdoc.sh script.

2. **Modify the Skip List**:

- Add or remove file or directory patterns you want to exclude.
- Each line in the CSV file represents a pattern to be skipped.
- Example: To add a custom pattern, simply add a new line with the pattern, like `private_`.
- Your modified list might look like this:

...

logs

node_modules

private_

dist

build

.gradle

...

Now all files or folders with the pattern `private_` in its name will be ignored in the documentation process.

3. ****Save the CSV File****:

- After making your changes, save and close the CSV file.

5. ****Re-run the Script****:

- Execute the script again to apply the new Skip List settings.

Known Issues and Solutions

Syntax Errors in Mermaid Diagrams

- ****Issue****: Occasional syntax errors in AI-generated Mermaid diagrams, such as misplaced quotes or empty parentheses.
- ****Current Solutions****:
 - ****Automated Fixes****: Script (`fix_mermaid_syntax`) and AI-driven (`fix_mermaid_syntax_with_bito`) methods are used for common syntax corrections.
 - ****Manual Editing****: For unresolved errors, manual editing can be done using the [Mermaid Live Editor](https://mermaid.live/).
 - ****Update Command****: Post-editing, update diagrams in your markdown documentation using:

...

```
mmdc -i High_Level_Doc.md -o High_Level_Doc.md
```

...

Ongoing Efforts

- We're continuously improving our AI models and scripts based on user feedback.
- Future updates will focus on reducing manual intervention and enhancing the user experience.

Your feedback is invaluable in helping us refine and improve this tool.

skip_list.csv (AI-Automation\documentation\create_overview_doc\skip_list.csv):

logs

node_modules

dist

target

bin

package-lock.json

data.json

build

.gradle

.idea

gradle

extension.js

vendor.js

ngsw.json

polyfills.js

init

.gv

README.md (AI-Automation\documentation\README.md):

AI Documentation Automations

These intelligent AI automations provide various approaches to documenting your code. Use as is or feel free to edit them to fit your needs.

Two documentation automations are available currently:

[Module level overview and visualization](https://github.com/gitbito/AI-Automation/tree/main/documentation/create_overview_doc)

This is designed to automate the generation of documentation for a codebase. You get an overview of the module in natural language, an explanation of all the functions and variables and their role in the module. You also get a visualization Flow Map of the code flow. The generated documentation utilizes tools such as Bito, Code2Flow, Graphviz, and jq. This currently works in Python or JS (you can add more languages easily) and documentation can be generated in over 50 spoken languages (English, German, Chinese, etc).

[File level documentation](https://github.com/gitbito/AI-Automation/tree/main/documentation/create_code_doc)

This automation is used to generate documentation for files in a specified folder and its subfolders. It creates a document folder and copies the directory structure from the original folder to the document folder. Then, it creates documentation for each file in the specified folder and saves it in the corresponding location within the document folder. Works in over 50+ programming languages, and documentation can be generated in over 50 spoken languages (English, German, Chinese, etc).

Several different automations. Provide Bito CLI a directory and it will automatically provide a detailed overview, visualization, and documentation for each file including summary of the file, dependencies, documentation regarding class/modules, function/methods, etc. Works in over 50+ programming languages, and documentation can be generated in over 50 spoken languages (English, German, Chinese, etc).

commit_message_generator.py (AI-Automation\git\commit_msg\commit_message_generator.py):

```
import subprocess
```

```
import argparse
```

```
import os
```

```
def generate_commit_message(repo_path, prompt_path):
```

```
    diff_command = "git -C {} diff".format(repo_path)
```

```
    diff_output = subprocess.check_output(diff_command, shell=True, universal_newlines=True)
```

```
    # Write diff output to a file
```

```
    diff_file = os.path.join(repo_path, 'diff_output.txt')
```

```
    with open(diff_file, 'w') as file:
```

```
        file.write(diff_output)
```

```
    # Process the diff_output and generate the commit message using bito CLI commands
```

```
    bito_command = "bito -p {} -f {}".format(prompt_path, diff_file)
```

```
    bito_output = subprocess.check_output(bito_command, shell=True, universal_newlines=True)
```

```
    commit_message = bito_output.strip()
```

```
    # Write commit message to a file
```

```
    commit_file = os.path.join(repo_path, 'commit_message.txt')
```

```
    with open(commit_file, 'w') as file:
```

```
        file.write(commit_message)
```

```
    # Remove the diff_output file
```

```
    os.remove(diff_file)
```

```
    return commit_message
```

```
def parse_arguments():

    parser = argparse.ArgumentParser(description='Generate commit message based on diff of changes.')

    parser.add_argument('--repo', required=True, help='Path to the git repository')

    parser.add_argument('--prompt', required=True, help='Path to the prompt file')

    args = parser.parse_args()

    return args
```

```
def main():

    args = parse_arguments()

    commit_message = generate_commit_message(args.repo, args.prompt)

    print("Commit message to use:")

    print(commit_message)
```

```
if __name__ == "__main__":

    main()
```

commitmsg.pmt (AI-Automation\git\commit_msg\prompts\commitmsg.pmt):

Please generate a commit message based on the following changes:

```
{{%input%}}
```

README.md (AI-Automation\git\commit_msg\README.md):

```
# commit_message_generator.py
```

This Python script is a tool to generate commit messages based on the diff of changes in a git repository. The script uses

`subprocess` to run shell commands, `argparse` to parse command line arguments, and `os` for file and directory operations.

Function: generate_commit_message(repo_path, prompt_path)

This function generates a commit message based on the diff of changes in a git repository.

Parameters:

- `repo_path`: A string representing the path to the git repository. No default value.
- `prompt_path`: A string representing the path to the prompt file. No default value.

Return:

This function returns a string representing the commit message.

NOTE: The commit message will also be stored in `commit_message.txt` file in the git repository directory, respectively

Exceptions:

This function might raise a `subprocess.CalledProcessError` if the `git diff` or `bit` command fails.

Function: parse_arguments()

This function parses command line arguments.

Return:

This function returns an `argparse.Namespace` object containing the parsed arguments.

Function: main()

This function is the main entry point of the script. It parses command line arguments, generates a commit message based on the diff of changes, and prints the commit message.

Usage:

To use this script, run it from the command line with the `--repo` and `--prompt` options, like so:

```
python commit_message_generator.py --repo /path/to/repo --prompt /path/to/prompt
```

Replace `/path/to/repo` with the path to your git repository, and `/path/to/prompt` with the path to your prompt file. The script will print the generated commit message. The commit message will also be stored in `commit_message.txt` file in the git repository directory, respectively.

Prompt to generate commit message is provided in `prompts/commitmsg.pmt` in this folder

Assumptions:

- The `git` command is available in the system's PATH.
- The `bito` command is available in the system's PATH. Available here: <https://github.com/gitbito/CLI>
- The repository at `repo_path` is a valid git repository.
- The `prompt_path` file exists and is readable.

LICENSE (AI-Automation\LICENSE):

MIT License

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README.md (AI-Automation\README.md):

AI Automations

Intelligent AI automations using the Bito CLI and other tools. Please use them or customize them to your needs!

Four intelligent automations are available currently:

[Documentation](<https://github.com/gitbitto/AI-Automation/tree/main/documentation/>)

Several different automations. Provide Bito CLI a directory and it will automatically provide a detailed overview, visualization, and documentation for each file including summary of the file, dependencies, documentation regarding class/modules, function/methods, etc. Works in over 50+ programming languages, and documentation can be generated in over 50 spoken languages (English,

German, Chinese, etc).

[Test Case Generation](https://github.com/gitbito/AI-Automation/tree/main/unittests/gentestcase)

Provide Bito CLI a file and it will automatically generate function/method tests along the happy path as well as boundary/edge cases.

If it's an API/interface, it will build test related to testing the interface, authorization, input validation, throttling, etc. It will generate

mocks/stubs as necessary. The two prompts used are

[here](https://github.com/gitbito/AI-Automation/blob/main/unittests/gentestcase/prompts/gen_test_case_1.pmt) and

[here](https://github.com/gitbito/AI-Automation/blob/main/unittests/gentestcase/prompts/gen_test_case_2.pmt).

[Release Notes](https://github.com/gitbito/AI-Automation/tree/main/releasenotes)

This Python script uses the Bito CLI to generate release notes based on the diff of changes in a git repository between commits.

Provided by [@WimPauwelsBerthylis](https://github.com/WimPauwelsBerthylis), thanks!

[Generate Commit Messages](https://github.com/gitbito/AI-Automation/tree/main/git/commit_msg)

Generate commit messages given a repo path.

Prerequisites

Bito CLI, available [here](https://github.com/gitbito/CLI).

genrelease.pmt (AI-Automation\releasenotes\prompts\genrelease.pmt):

Given below are Release Note Guidelines:

To ensure that the code release version is clearly documented for its differences to the previous version and can be understood

seamlessly by all stakeholders, follow the guidelines below to document the various changes in the code repository and the format used is Markdown format following the given template.

Between the dashed lines (-----) below is the markdown template to use, instructions between brackets in the template are not part of the template, they need to be used as extra instructions for the generation of the release notes but may not be include in the output:

RELEASE NOTES (static text, do not change this header)

Target platform (if applicable otherwise remove this chapter; describes the platform for which the code is generated)

- (bulleted list with items belonging to this header)

Installation/Execution (if applicable otherwise remove this chapter; describes installation and execution instructions)

- (bulleted list with items belonging to this header)

Assumptions (if applicable otherwise remove this chapter; lists special conditions that are assumed to occur)

- (bulleted list with items belonging to this header)

History (static text, do not change this header)

<VERSION> (change this to either: 1. the version of the newest code if found or 2. the commit hash/tag of the newest code.

make sure there is always a version indicated, if there is no reference then use 'latest', see also the further instructions below the template on this.)

- (bulleted list with a clear description of the differences between old and new code versions. Start each line with the type of the difference within curly brackets. Possible options are {FIX, ENHANCEMENT, FEATURE, DOC, SECURITY}, only use these categories. Then clearly describe the difference. When there is a number referenced for the category related to this difference then

add this number starting with a hash sign in round brackets at the end of the line, for instance a bug number)

- (make sure all differences are listed, one bullet per change)
- (make sure all differences are listed, one bullet per change, use as many as needed)

<release notes of older versions> (if an older version of release notes is already available in the code base add all of the items under the History header in the old file here at the bottom, ordered for newest to oldest. If none are found then always mention 'No previous version notes available'.)

Known issues (only when issues found with label 'TODO', otherwise mention 'No known issues'.)

- (bulleted list with all issues that have the label 'TODO'.)

Further instructions:

- In the final output remove the dashed lines from the template
- primary goal is to have all differences documented in the release notes, aim for completeness, clarity and brevity
- the version reference is always on header level 2, there should only be one latest version from the code diff and this latest number should be used
- differences are always in a bulleted list below header level 2
- in the final output all instructions that in the template were enclosed in () or <> should be replaced as per instruction and should not appear in the final output.

Now generate the release notes with the above instructions based on the following changes:

{{%input%}}

In the output NEVER mention any of the instructions itself nor notes nor other comments, only include required sections for the release notes as required by the template.

README.md (AI-Automation\releasenotes\README.md):

release_notes_generator.py

This Python script is a tool to generate release notes based on the diff of changes in a git repository between commits. The script uses `subprocess` to run shell commands, `argparse` to parse command line arguments, and `os` for file and directory operations. It is heavily based on the commit_message_generator.py

Function: generate_release_notes(repo_path, prompt_path, commit1, commit2, diff_file, verbose)

This function generates a release note in Markdown format based on either the diff of changes between commits in a git repository or the diff found in the specified file.

Parameters:

- `repo_path`: A string representing the path to the git repository. No default value.
- `prompt_path`: A string representing the path to the prompt file. No default value.
- `commit1`: A string representing the hash or tag of the oldest commit to compare the differences to. This parameter is optional, in case it is omitted it will use the HEAD version.
- `commit2`: A string representing the hash or tag of the newest commit to compare the differences with. This parameter is optional, in case it is omitted it will use the current status of the working dir.
- `diff_file`: Path to a manually generated difference file. Use only when not using --commit1 and --commit2. This parameter is optional.
- `verbose`: A boolean, when enabled it will print the strings used by the script for debugging purposes.

Return:

This function returns a string representing release notes in Markdown format.

NOTE: The commit message will also be stored in `release_noted.md` file in the git repository directory.

Exceptions:

This function might raise a ``subprocess.CalledProcessError`` if the ``git diff`` or ``bito`` command fails.

Function: parse_arguments()

This function parses command line arguments. Valid arguments are:

- ``--repo_path``: Path to the git repository. Required.
- ``--prompt_path``: Path to the prompt file. Required.
- ``--oldver``: Commit Tag/Hash of the old version. Optional, in case it is omitted it will use the HEAD version.
- ``--newver``: Commit Tag/Hash of the new version. Optional, in case it is omitted it will use the current status of the working dir.
- ``--diff_file``: Path to a manually generated difference file. Use only when not using `--oldver` and `--newver`. Optional.
- ``-v`` or ``--verbose``: Optional flag for debugging purposes.
- ``-h`` or ``--help``: Optional flag to display the help screen

Return:

This function returns an ``argparse.Namespace`` object containing the parsed arguments.

Function: main()

This function is the main entry point of the script. It parses command line arguments and generates release notes based on the diff of changes.

Usage:

To use this script, run it from the command line with the ``--repo`` and ``--prompt`` and ``--oldver`` and ``--newver`` options, like so:

...

```
python .\release_notes_generator.py --repo /path/to/repo --prompt /path/to/prompt --oldver <oldhash> --newver <newhash> -v
```

...

or alternatively with the `--repo` and `--prompt` and `--diff_file` options, like so:

```
...  
  
python .\release_notes_generator.py --repo /path/to/repo --prompt /path/to/prompt --diff_file /path/to/diff_file  
  
...
```

Replace `/path/to/repo` with the path to your git repository, and `/path/to/prompt` with the path to your prompt file. The script will print the generated release message. The release message will also be stored in `release_notes.md` file in the git repository directory, respectively.

Prompt to generate release message is provided in `prompts/genrelease.pmt` in this folder

Assumptions:

- The `git` command is available in the system's PATH.
- The `bito` command is available in the system's PATH. Available here: <https://github.com/gitbito/CLI>
- The repository at `repo_path` is a valid git repository.
- The `prompt_path` file exists and is readable.

release_notes_generator.py (AI-Automation\releasenotes\release_notes_generator.py):

```
import subprocess
```

```
import argparse
```

```
import os
```

```
def generate_release_notes(repo_path, prompt_path, commit1=None, commit2=None, diff_file=None, verbose=False):
```

```
    temp_diff = False
```

```
if commit1 and commit2:
```

```
    # Compare between 2 specified committed versions
```

```
    diff_command = f"git -C {repo_path} diff {commit1}..{commit2}"
```

```
elif commit1:
```

```
    # compare between working copy and specified committed version
```

```
    diff_command = f"git -C {repo_path} diff {commit1}"
```

```
elif diff_file:
```

```
    diff_command = None
```

```
else:
```

```
    # compare between working copy and HEAD
```

```
    diff_command = f"git -C {repo_path} diff"
```

```
if verbose:
```

```
    print(diff_command)
```

```
# execute the diff command
```

```
if diff_command:
```

```
    # diff_output = subprocess.check_output(diff_command, shell=True, universal_newlines=True, encoding='utf-8')
```

```
    output = subprocess.run(diff_command, capture_output=True)
```

```
    diff_output = output.stdout.decode("utf-8")
```

```
if verbose:
```

```
    print(diff_output)
```

```
# Write diff output to a file
```

```
diff_file = os.path.join(repo_path, 'diff_output.txt')
```

```
with open(diff_file, 'w', encoding="utf-8") as file:
```

```
    file.write(diff_output)
```

```
temp_diff = True
```

```
# Process the diff_output and generate the commit message using bito CLI commands
```

```
bito_command = f"bito -p {prompt_path} -f {diff_file}"
```

```
bito_output = subprocess.check_output(bito_command, shell=True, universal_newlines=True)
```

```
release_notes = bito_output.strip()
```

```
if verbose:
```

```
    print("\nRelease Notes:")
```

```
    print(release_notes)
```

```
# Write release notes to a markdown file
```

```
release_file = os.path.join(repo_path, 'release_notes.md')
```

```
with open(release_file, 'w') as file:
```

```
    file.write(release_notes)
```

```
# Remove the temporary diff_output file
```

```
if temp_diff:
```

```
    os.remove(diff_file)
```

```
def parse_arguments():
```

```
    parser = argparse.ArgumentParser(description='Generate release notes based on diff of 2 arbitrary commits.')
```

```
    parser.add_argument('--repo', required=True, help='Path to the git repository')
```

```
    parser.add_argument('--prompt', required=True, help='Path to the prompt file')
```

```

parser.add_argument('--oldver', required=False, help='Commit Tag/Hash of the old version (optional)')

parser.add_argument('--newver', required=False, help='Commit Tag/Hash of the new version (optional)')

parser.add_argument('--diff_file', required=False, help='Path to file containing the differences between release versions (optional,
only when --oldver and --never are not specified)')

parser.add_argument('-v', '--verbose', required=False, help='Display info', action='store_true')

args = parser.parse_args()

if args.verbose:

    print(args)

return args

```

```

def main():

    args = parse_arguments()

    generate_release_notes(args.repo, args.prompt, args.oldver, args.newver, args.diff_file, args.verbose)

```

```

if __name__ == "__main__":

    main()

```

extract_code.sh (AI-Automation\unittests\gentestcase\extract_code.sh):

```
#!/bin/bash
```

```

if [ "$#" -ne 1 ]; then

    echo "Usage: $0 <source_file>"

    exit 1

```



```
fi
```

```
if [ ! -f "$1" ]; then
```

```
    echo "Error: File $1 not found."
```

```
    exit 1
```

```
fi
```

```
# Extracting the filename without the extension
```

```
filename=$(basename -- "$1")
```

```
filename_no_ext="${filename%.*}"
```

```
in_code_block=false
```

```
block_content=""
```

```
block_lang=""
```

```
python_counter=0
```

```
javascript_counter=0
```

```
bash_counter=0
```

```
default_counter=0
```

```
while IFS= read -r line; do
```

```
    if [[ $line == ` `* ]]; then
```

```
        if $in_code_block; then
```

```
            # End of a code block
```

```
            in_code_block=false
```

Determine file extension based on language and increment counter

case "\$block_lang" in

python)

ext=".py"

((python_counter++))

counter=\$python_counter

::

javascript)

ext=".js"

((javascript_counter++))

counter=\$javascript_counter

::

js)

ext=".js"

((javascript_counter++))

counter=\$javascript_counter

::

bash)

ext=".sh"

((bash_counter++))

counter=\$bash_counter

::

*)

ext=".txt"

((default_counter++))

counter=\$default_counter

```
::
```

```
esac
```

```
# Construct the filename using the source file's name, language, and counter
```

```
output_file="test_case_${filename_no_ext}_${counter}$ext"
```

```
# Save content to file
```

```
echo "$block_content" > "$output_file"
```

```
block_content=""
```

```
block_lang=""
```

```
echo "Code saved in: $output_file"
```

```
else
```

```
# Start of a code block
```

```
in_code_block=true
```

```
block_lang="${line#\`\"`\"}"
```

```
fi
```

```
elif $in_code_block; then
```

```
if [ -z "$block_content" ]; then
```

```
block_content="$line"
```

```
else
```

```
block_content="$block_content"$'\n'"$line"
```

```
fi
```

```
fi
```

```
done < "$1"
```

generate_testcases.sh (AI-Automation\unittests\gentestcase\generate_testcases.sh):

```
#!/bin/bash
```

```
#set -x
```

```
# Check if bito is installed
```

```
if ! command -v bito &> /dev/null
```

```
then
```

```
    echo "bito could not be found. Please install it and try again."
```

```
    exit 1
```

```
fi
```

```
# Setting some required variables
```

```
BITO_CMD=`which bito`
```

```
BITO_CMD_VEP=""
```

```
BITO_VERSION=`$BITO_CMD -v | awk '{print $NF}`
```

```
# Compare BITO_VERSION to check if its greater than 3.7
```

```
if awk "BEGIN {exit !($BITO_VERSION > 3.7)}"; then
```

```
    BITO_CMD_VEP="--agent gentestcase"
```

```
fi
```

```
# Ensure at least one argument is provided
```

```
if [ "$#" -lt 1 ]; then
```

```
    echo "Usage: $0 <code_file> [<context_file>...]"
```

```
    exit 1
```

```
fi
```

```
# Remove any context if found
```

```
rm -f "context.txt"
```

```
# Extract the filename without the extension
```

```
filename=$(basename -- "$1")
```

```
extension="${filename##*.}"
```

```
filename="${filename%.*}"
```

```
inputfile_for_ut_gen=$1
```

```
# Ask the user for their preferred testing framework
```

```
read -p "Please enter your preferred testing framework: " framework
```

```
# Read the prompts into variables
```

```
prompt=$(cat prompts/gen_test_case_1.pmt)
```

```
prompt2=$(cat prompts/gen_test_case_2.pmt)
```

```
# Replace the placeholders in the prompt with the user's input and filename
```

```
prompt=${prompt/\$framework/${framework}}
```

```
prompt=${prompt/\$filename/${filename}.${extension}}
```

```
# Initialize context variable
```

```
context=""
```

```
# If there are additional arguments, concatenate their contents into the context variable
```

```
shift # Skip the first argument
```

```
for file in "$@"; do
```

```
if [ -f "$file" ]; then

    context+=${("<$file")}

fi

done

# Replace the $context placeholder in the prompt with the context

prompt=${prompt/\$context/${context}}

# Create a temporary file and write the modified prompt to it

temp_prompt=$(mktemp)

echo "$prompt" > "$temp_prompt"

echo "Generating unit tests..."

# Run the bito command with the first prompt

if ! bito $BITO_CMD_VEP -p "$temp_prompt" -f $inputfile_for_ut_gen -c "context.txt" > /dev/null; then

    echo "Error: The bito command failed."

    rm "$temp_prompt"

    exit 1

fi

echo "$prompt2" > "$temp_prompt"

# Run the bito command with the second prompt and store the output

if ! bito $BITO_CMD_VEP -p "$temp_prompt" -f $inputfile_for_ut_gen -c "context.txt" > "${filename}.$."; then

    echo "Error: The bito command failed."

    rm "$temp_prompt"
```

```
exit 1
```

```
fi
```

```
# Run extract_code.sh on the output file
```

```
./extract_code.sh "${filename}.$"
```

```
rm "${filename}.$"
```

```
# Remove the temporary file
```

```
rm "$temp_prompt"
```

```
gen_test_case_1.pmt (AI-Automation\unittests\gentestcase\prompts\gen_test_case_1.pmt):
```

Read the following guidelines:

Unit Test Case Generation Guidelines:

To ensure that our code is robust, maintainable, and free from defects, it's essential to write comprehensive unit tests. Follow the guidelines below to create unit test cases for functions, methods, interfaces, and APIs in the provided code:

1. Setup & Prerequisites:

- Ensure you have the testing framework configured (like \$framework).
- Understand the code under test fully before writing tests.

2. Write Tests:

- Cover every function, method, endpoint, route, and code path.
- Do not leave any TODO comments - write all test cases now.

3. Input Validation:

- Provide valid and invalid input data covering expected and unexpected cases.

4. Output Validation:

- Assert the system under test produces the correct outputs and side effects.

5. Mocking & Dependency Isolation:

- Mock out external dependencies like databases, APIs, etc.

6. Cleanup:

- Return the system to its initial state after each test.

3. Be sure to generate all the test cases for the given code file at one time, don't leave anything for later. Cover all routes and endpoints, all functions or methods and avoid leaving comments for future code to write, just write the entire test file covering everything. Leaving comments mentioning that more tests should be done or that more endpoints should be covered should be avoided at all costs. Please generate all testing code for all functions and endpoints in the code file.

4. All the test code should be written in a single code block and the entire file should be generated.

For example, do NOT write a test case like:

```
test('should do something', () => {  
  
  // TODO: complete this test  
  
});
```


Or:

// Write tests for the rest of the functions or endpoints

Now generate a unit test that complies with them.

The file to be tested is named '\$filename'.

That was the file to cover with tests, now here are some files that could help you have context for the test:

\$context

gen_test_case_2.pmt (AI-Automation\unittests\gentestcase\prompts\gen_test_case_2.pmt):

Having gone through the initial phase of generating unit test cases, let's take a step further to ensure that all paths in our code are thoroughly tested. This includes both the happy paths, and more importantly, the error paths.

1. Completion of Happy Path Tests (Only if needed):

- Please review the previously generated test cases. If there are any incomplete tests or areas not fully covered, let's complete those. This includes any comments like "//write the rest of the test cases here" or "//write test cases for the rest of the endpoints here".

2. Generation of Error Path Tests:

- Now, let's focus on the potential points of failure in the code. This includes scenarios with invalid input data, unexpected user behavior, failure of external dependencies and different responses.

- Please generate test cases that simulate these error conditions. Ensure that the system handles them correctly and provides the

right error messages, status codes, and side effects.

Remember, the goal here is to ensure the robustness of our code by testing all possible paths.

Please output the entire test on a single code block, with the happy and error paths, I want to copy it directly from this last response so print the entire test file.

Also, I want to add this watermark as initial comment on the file: "This test file was generated by Bito, see more on <https://github.com/gitbito/AI-Automation>"

README.md (AI-Automation\unittests\gentestcase\README.md):

Test Case Generation

Description

This script is used to generate test cases. Provide the Bito CLI a file and it will automatically generate function/method tests along the happy path as well as boundary/edge cases. If it's an API/interface, it will build test related to testing the interface, authorization, input validation, throttling, etc. It will generate mocks/stubs as necessary.

Video explanation

[[YouTube video](https://i.ibb.co/pddzQDS/thumbnail.png)](https://youtu.be/qxpho1Q1RIw)

How to use:

Usage

```
```bash
```

```
./generate_testcases.sh source_file context_file_1 context_file_2 ...
```

```
```
```

generate_testcases.sh

This code is a bash script that utilizes the "bito" command-line tool (<https://github.com/gitbito/CLI>) to generate test cases for a given code file. The script performs the following steps:

1. Check if "bito" is installed:

- If "bito" is not found, it displays an error message and exits.

2. Check the number of arguments:

- The script expects at least one argument, which should be the path to the code file.
- The following arguments are code files that can be useful for the AI to have context.
- If the number of arguments is incorrect, it displays a usage message and exits.

3. Delete the "context.txt" file if found.

- This file can be useful if the user wants to keep talking with the AI after using the tool.
- It is erased every time the tool runs to start from zero.

4. Extract the filename without the extension:

- The script extracts the filename from the provided path and removes the file extension.
- The extracted filename is stored for later use.

5. Ask the user for his/her preferred testing framework and save it in a variable.

6. Read the two prompts into variables to be used by the "bito" command.

- The script reads the prompts into variables.
- Then replaces the desired framework, the file to cover name and pastes the concatenated context files at the end of the first

prompt.

7. Run the "bito" command:

- The script executes the "bito" command with the following options:
- -p "\$temp_prompt": This is the first prompt with the replaced variables according to the user's input.
- -f "\$1": Specifies the path to the code file provided as an argument.
- -c "context.txt": the file where the context of the conversation with the AI is to be written.
- The output of the "bito" command is redirected to "/dev/null" to avoid printing the conversation into the terminal.

8. Run the "bito" command:

- The script executes the "bito" command with the following options:
- -p "\$temp_prompt": This time, this variable is loaded with the second prompt, which tells the AI to complete the test and cover

error/boundary paths.

- -f "\$1": Specifies the path to the code file provided as an argument.
- -c "context.txt": the file where the context of the conversation with the AI is to be written.
- The output of the "bito" command is redirected to a temporary file named "\${filename}.\$\$" for further processing.

9. Run "extract_code.sh" on the output file:

- The script executes the "extract_code.sh" script on the temporary output file generated in the previous step.
- The purpose and functionality of the "extract_code.sh" script is documented in section below.
- If a code block does not specify a language or if the language is not one of the ones recognized by the script (`python`,

`javascript`, `js`, `bash`), the script will save the code block to a `.txt` file. *Update the code to add more languages based on your needs*

10. Remove the temporary output file:

- The script removes the temporary output file "\${filename}.\$\$" to clean up after execution.

Usage Detail

The script requires at least one argument: the path to the source file. If the source file does not exist or if the number of arguments is incorrect, the script will display an error message and exit.

The rest of the arguments are optional, but very useful. In addition to the file to cover with tests, you can pass more files to be used by the AI to have context about the code you want to cover with tests. You can pass as many files as you want, but for AI performance reasons, it is recommended not to pass more than 5 extra files.

NOTE: Please checkout and change mode to execute for all shell scripts in `AI-Automation/unittests/gentestcase` folder and run the script from the folder itself.

```
```bash
```

```
./generate_testcases.sh source_file context_file_1 context_file_2 ...
```

```
```
```

```
# extract_code.sh
```

This is a bash script that extracts code blocks from a given source file and saves them as separate files. The script assumes that the source file uses Markdown syntax, with code blocks surrounded by triple backticks (```). The language of the code block is determined by the string immediately following the opening backticks (e.g., ```python).

Usage Detail

The script requires one argument: the path to the source file. If the source file does not exist or if the number of arguments is incorrect, the script will display an error message and exit.

```
```bash
```

```
./extract_code.sh source_file
```

```
```
```

Main Functionality

The script reads the source file line by line. When it encounters a line that starts with triple backticks, it checks whether this line signifies the start or the end of a code block.

- If it's the start of a code block, the script stores the language of the code block (the string immediately following the backticks) in

``block_lang`` and sets ``in_code_block`` to ``true``.

- If it's the end of a code block, the script determines the file extension based on the language stored in ``block_lang``. It then

increments the counter corresponding to that language. The content of the code block is saved to a file named

``test_case_<source_filename>_<counter>.<extension>``, where ``<source_filename>`` is the name of the source file without the

extension, ``<counter>`` is the counter for the corresponding language, and ``<extension>`` is the file extension determined by the language.

Edge Cases

The script assumes that the code blocks in the source file are correctly formatted according to Markdown syntax. If a code block does not specify a language or if the language is not one of the ones recognized by the script (``python``, ``javascript``, ``js``, ``bash``), the script will save the code block to a ``.txt`` file. *Update the code to add more languages based on your needs*

Example

Given a source file ``example.md`` with the following content:

```
```python
```

```
print("Hello, world!")
```

```
'''
```

```
```bash
```

```
echo "Hello, world!"
```

```
'''
```

The script will create two files: `test_case_example_1.py` and `test_case_example_1.sh`, each containing the corresponding code block.