PROJECT PROPOSAL

15-112 Term Project | Joyce Truong

PROJECT DESCRIPTION

Name: MemoRe:

Description: MemoRe: is an application inspired by Roam Research in which users are given the capability to organize notes into a mind map of interconnected thoughts. Here, users will be able to create notes using a built-in text editor, and then link them to other notes if those other notes are mentioned within the new note. This will then organize the notes as an interconnected mind map in a workspace. Users will also be able tag notes within each mind map to highlight specific ideas and instances. Moreover, users can have multiple workspaces with different mind maps and notes. Overall, MemoRe: seeks to enable users to have a second brain in which they can traverse their past thoughts and look at how they relate to new thoughts.

COMPETITIVE ANALYSIS

Roam Research: My project is similar to this in the sense that it was inspired by the mind mapping of thoughts that Roam Research's note-taking platform. The differentiating factor is the fact that Roam Research is more focused on adapting note-taking by toggling visibility in the text-editor, isolating sections, and giving users other options that are generally not available in other note-taking apps. On the other hand, I am more focused on the organization of notes in a mind map, and as such, I have added on the feature of tagging and more dynamic space allocation based on grouping. Moreover, in Roam Research, it is more focused on showing the breakdown of interconnectedness from a starting point (the point with the highest degree of connectedness i.e. the most connections), rather allowing things to exist within the graph without being connected. On the other hand, my organizational method suggests that there is no one starting point or breakdown from a single row, but rather, things can be interconnected and at the same level of importance.

Aside from Roam Research, the idea of graphical note organization is yet to be seen for note-taking apps such as Notability, Goodnotes, Notion, and Bear. These all offer their own pros when it comes to note-taking, such as markup language support, database and page flexibility, handwriting to text translation, and simultaneous audio recording and note-taking. However, my solution focuses not on improving the note-taking experience, but improving the note connectivity experience so that users can better understand how their ideas are interconnected and build their second brain.

STRUCTURAL PLAN

- Code Folder
    - Main Program
        - Initialize each mode
        - Set active mode to Homescreen Mode
        - Run program
    - Homescreen Mode
        - Clicked button to go to Create Workspace Mode function
        - Clicked button to go to Open Existing Workspace Mode function
    - Create Workspace Mode
        - Name + description entry function
        - Current date auto-generation function
        - Clicked go home button function
        - Clicked create workspace button to go to Workspace Mode function
    - Open Existing Workspace Mode

  - List all current workspace names, descriptions, and dates created function
  - Scroll triangles function
  - Click on an existing workspace to highlight function
  - Click on enter workspace to go to Workspace Mode function
- Workspace Mode
  - Create New Note function
  - Generate Existing Notes function (if existing notes True)
    - Generate Map function
  - Sort by tags function
  - Tag function
  - Link/unlink function
  - Select/highlight note function
  - Edit note function
  - Go home function
  - Save workspace function
- Note Mode
  - Bold, highlight, underline, italicize functions
  - Cursor + select function
  - Save note function
  - Go back function
  - Auto-generate link function
  - Manually link function
- User Interface Widgets
  - Text Entry Object
    - Delete, space, typing functions
    - Bold, highlight, underline, italicize functions
    - New line + new tab function
    - Make text function
  - Button Object
    - Button location function

            - Button is clicked function
            - Mouse is hovering function
            - Make button function
        - Scroll Triangles Object
            - Scroll is valid up/down function
            - Scroll button is clicked function
            - Make scroll triangles function
- Design Proposal Folder
    - Project Proposal
    - Storyboard
- README.md
    - Project description
    - User guide
    - Link to working demo

ALGORITHMIC PLAN

Overall: I am going to be using a ModularApp structure and making each separate page a Mode to be called upon. This structure was inspired by https://github.com/spartace98/15-112-Term-Project/.

Text Editor:

- I am going to make a text entry object and make a function within it that adds '\n' each time a line exceeds a certain character count (new lines).
- I will also make a cursor object that appears after each character typed after a mouse press. This cursor starts where the mouse is pressed and will move if the mouse is pressed again.
- I will make a mouse pressed and dragged function that will allow users to select words. When the mouse is released, it will then prompt a dropdown box to link, or the user can click bold, underline, highlight, or italicize on the side. (mousePressed, mouseDragged, mouseReleased)

- If the save button is clicked, the note is added to a dictionary of notes with their tags in the program and as a tuple with name and date to the main page.
- Description is autogenerated from the first few characters that are typed in the file alongside ellipses.

Mind Map Auto-Organization:

- I am going to create a dictionary of notes alongside the documents they are linked to.
- Then, I will generate a 2D list of groups based on that dictionary with everything that is connected within one group (if every single note is connected with one another note, then there is only one group total).
- Then I will create a corresponding 2D list of node cx, cy locations to the one above. This will be used to create the links as specified below.
- The organization will happen based on the number of groups and through rows and columns of groups arranged in a clock formation. Once more items grow beyond what is allowed in the clock formation, it will then make a bigger clock outside of it in a spiderweb formation. This will be done using the clock framework in CMU 15-112 animations 2 notes.
- When a note is added, it will appear standalone as its own group, and if linked, it will then move to be part of another group's framework. If different groups are linked, the order of the groups will change so that linked groups are beside one another.

Linking:

- Links will be created by seeing if a note has membership in another note's dictionary items. Then, if there is, I will retrieve the two notes' locations from the 2D list of locations and draw a line between them.
- If links are destroyed, the notes will be removed from each others' dictionary items. To destroy a link, either do the same highlight two boxes process but with the unlink option, or make a circle as a midpoint of a link and clicking in it would give the unlink option.

Tagging:

- I will also create a dictionary of notes and their tags as well as a box of tags in the workspace.
- When a tag button is created, it finds all the notes in the dictionary with that tag and makes their box outline that tag's color. When the same tag is selected again, it un-colors it and makes everything gray again.
- To create a new tag, the tag boxes will have a create a new tag field with a create button. Colors for tags will be auto-generated.
- Tags will also show up automatically in the node of each note if it is associated with that note.

TIMELINE PLAN

Already Done

Homescreen Page, Preliminary Create New Workspace Page, Preliminary Open Existing Workspace Page

MVP

1. **1 Dec:** Text Editor
    a. **27 Nov:** Create New Note
    b. **30 Nov :** bold, underscore, italicize, highlight + new lines/tabs
    c. **1 Dec:** Save Note
    d. **1 Dec:** Open Existing Note
2. **2 Dec:** Mind map workspace of documents and links
    a. **28 Nov:** Workspace auto-adjustment with dots and lines
    b. **1 Dec:** Create workspace nodes (documents w/ name, date created, description)
    c. **2 Dec:** Dynamic auto-adjustment based on large degrees of connections/amounts of connections to one node
3. **3 Dec:** Linking
    a. **2 Dec:** Auto-linked documents
    b. **3 Dec:** Manually-linked documents

4. **4 Dec:** Tagging
    a. **3 Dec:** Tag documents in workspace
    b. **4 Dec:** Select a tag to highlight everything with that tag in workspace
5. **5 Dec:** Link all pages
    a. **5 Dec:** Finish Create New Workspace Page
    b. **5 Dec:** Finish Open Existing Workspace Page

Post-MVP

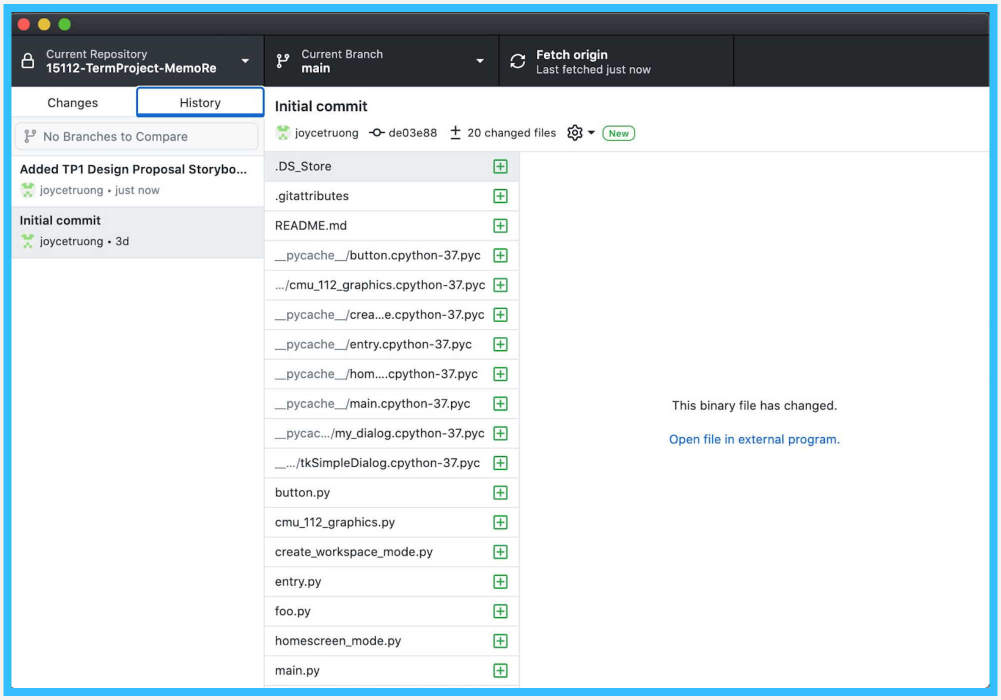
6. **5 Dec:** Saving to a local directory
    a. Each separate linked group is a new folder. If nothing is separated (everything connected), then no new folders within the parent directory.
7. **6 Dec:** Loading up existing local directory with mindmap
8. **7 Dec:** Text editor additional features (lists, headings, add images, search in file, etc.)
9. **8 Dec:** Size each node based on the amount of connections/degree of connectivity they have in the mindmap
10. **8 Dec:** Make a different mind map layout (based on layers of degrees of connection, based on more visible spread (MVP), etc.)
11. **9 Dec:** Finalize project and submit

VERSION CONTROL

Backup Method: GitHub Private Repository (git commits)

Backup Frequency Planned: Every 30 minutes working on the project + after each work session

Backup Link: https://github.com/joycetruong/15112-TermProject-MemoRe (It is private currently, but I can give you access to it if you provide me your GitHub username/email)



Current Repository
15112-TermProject-MemoRe

Current Branch
main

Fetch origin
Last fetched just now

Changes | History

No Branches to Compare

Added TP1 Design Proposal Storybo...
joycetruong • just now

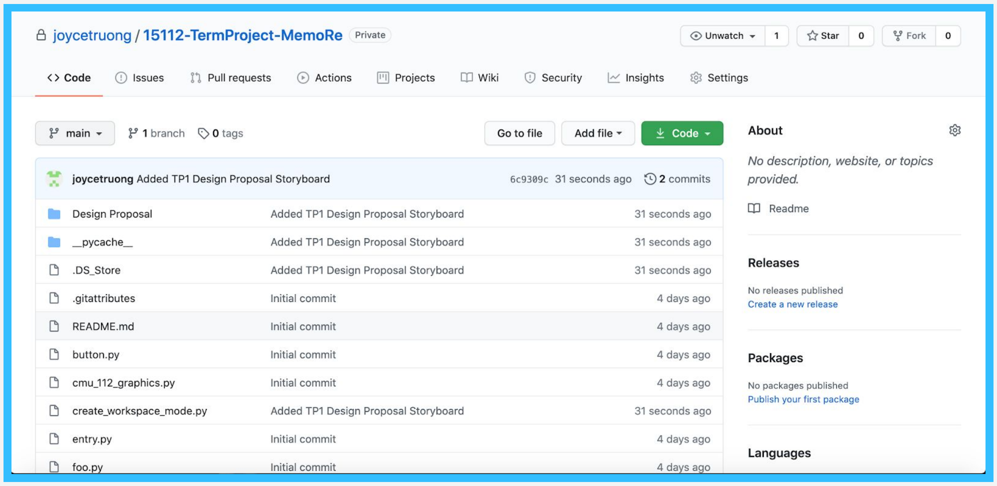
Initial commit
joycetruong • 3d

Initial commit
joycetruong de03e88 20 changed files New

- .DS_Store
- .gitattributes
- README.md
- __pycache__/button.cpython-37.pyc
- .../cmu_112_graphics.cpython-37.pyc
- __pycache__/crea...e.cpython-37.pyc
- __pycache__/entry.cpython-37.pyc
- __pycache__/hom....cpython-37.pyc
- __pycache__/main.cpython-37.pyc
- __pycac.../my_dialog.cpython-37.pyc
- __.../tkSimpleDialog.cpython-37.pyc
- button.py
- cmu_112_graphics.py
- create_workspace_mode.py
- entry.py
- foo.py
- homescreen_mode.py
- main.py

This binary file has changed.

Open file in external program.



joycetruong / 15112-TermProject-MemoRe Private

Unwatch 1 | Star 0 | Fork 0

Code | Issues | Pull requests | Actions | Projects | Wiki | Security | Insights | Settings

main | 1 branch | 0 tags | Go to file | Add file | Code

joycetruong Added TP1 Design Proposal Storyboard 6c9309c 31 seconds ago 2 commits

Design Proposal	Added TP1 Design Proposal Storyboard	31 seconds ago
__pycache__	Added TP1 Design Proposal Storyboard	31 seconds ago
.DS_Store	Added TP1 Design Proposal Storyboard	31 seconds ago
.gitattributes	Initial commit	4 days ago
README.md	Initial commit	4 days ago
button.py	Initial commit	4 days ago
cmu_112_graphics.py	Initial commit	4 days ago
create_workspace_mode.py	Added TP1 Design Proposal Storyboard	31 seconds ago
entry.py	Initial commit	4 days ago
foo.py	Initial commit	4 days ago

About

No description, website, or topics provided.

Readme

Releases

No releases published
Create a new release

Packages

No packages published
Publish your first package

Languages

MODULE LIST

I am not planning to use any external modules aside from cmu_112_graphics.

I am not planning on using any external hardware or technologies.

TP2 UPDATE

I have no major updates for TP2 aside from pivoting from saving the file and folder structure locally to focusing on in app performance. This means that I will attempt to add new features such as a new layout schematic for the mind-map to sort differently and work on making the text editor more functional, as opposed to making the program retrievable locally (unless time allows it!).