

```
# Importing necessary modules
```

```
import os
```

```
from dotenv import load_dotenv
```

```
from swarms import Agent
```

```
from swarm_models import OpenAIChat
```

```
from swarms_memory import ChromaDB
```

```
from swarms.prompts.visual_cot import VISUAL_CHAIN_OF_THOUGHT
```

```
from swarms import tool
```

```
# Loading environment variables from .env file
```

```
load_dotenv()
```

```
# Getting the Gemini API key from environment variables
```

```
gemini_api_key = os.getenv("GEMINI_API_KEY")
```

```
openai_api_key = os.getenv("OPENAI_API_KEY")
```

```
llm = OpenAIChat(
```

```
    openai_api_key=openai_api_key,
```

```
    max_tokens=1000,
```

```
    temperature=0.2,
```

```
)
```

```
# Making an instance of the ChromaDB class
```

```
memory = ChromaDB(
```

```
metric="cosine",  
n_results=3,  
multimodal=True,  
# docs_folder="images",  
output_dir="results",  
)
```

# Defining tool by creating a function and wrapping it with the @tool decorator and  
# providing the necessary parameters and docstrings to show the usage of the tool.

@tool

```
def make_new_file(file: str, content: str):
```

```
    """
```

Make a new file.

This function creates a new file with the given name.

Parameters:

file (str): The name of the file to be created.

Returns:

dict: A dictionary containing the status of the operation.

```
    """
```

```
    with open(file, "w") as f:
```

```
        f.write(f"{content}")
```

```
# Initializing the agent with the Gemini instance and other parameters
```

```
agent = Agent(  
    llm=llm,  
    agent_name="Multi-Modal RAG Agent",  
    agent_description=(  
        "This agent fuses together the capabilities of Gemini and"  
        " Visual Chain of Thought to answer questions based on the"  
        " input image."  
    ),  
    max_loops="auto",  
    autosave=True,  
    sop=VISUAL_CHAIN_OF_THOUGHT,  
    verbose=True,  
    # tools=[make_new_file],  
    long_term_memory=memory,  
)
```

```
# Defining the task and image path
```

```
task = (  
    "What is the content of this image, return exactly what you see"  
    " in the image."  
)  
  
img = "images/Screenshot_48.png"
```

```
# Running the agent with the specified task and image
```

```
out = agent.run(task=task, img=img)
```

```
print(out)
```