Implementation documentation:

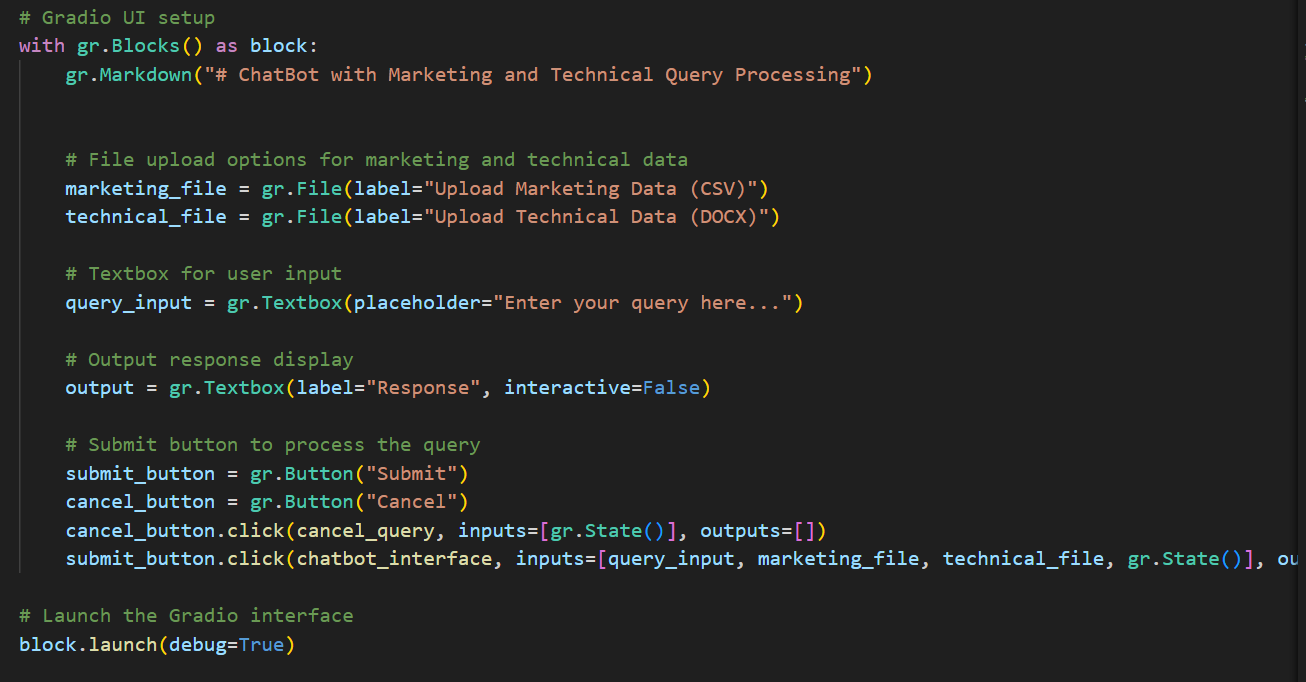
Code Folder Structure :

A screenshot of a computer

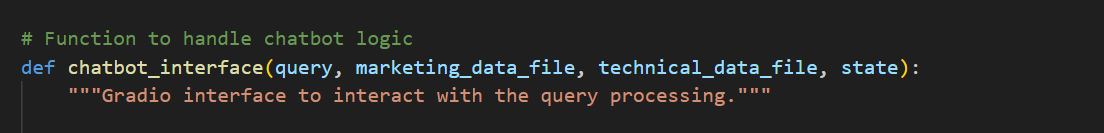
Description automatically generated

1. Data Sets : contains Keys and Data Files
2. Agents.pt : Marketing and Technical Agents
3. Intent.py : Intent Identifying Agent
4. Load\_data.py : functions to read uploaded files data
5. Multi\_Agent\_LLM\_Based\_Customer\_Service\_System.py : main file to run the application
6. requirement.txt : contains all the necessary libraries

Function for Gradio UI and Activities :



Handle Chatbot Logic and get response from agents and send to Gradio :



Marketing Agent: get Generated query. execute it on sqlite3 database and return response.

A screen shot of a computer program

Description automatically generated

Technical Agent: use ai by sending prompt and return response

A screenshot of a computer program

Description automatically generated

Generate\_sql\_query: Based on Marketing data and user query , this agent will create sql query to get proper response

A computer screen shot of text

Description automatically generated

Execture sql query in marketing agent:

A screen shot of a computer code

Description automatically generated

Identify the query's intent and determine if it's related to marketing, technical, or both:

A screen shot of a computer

Description automatically generated

Recognize the query intent and route it to the appropriate agent(s) for a response:

A screen shot of a computer code

Description automatically generated

Loads the Open API key from a JSON file and sets it as an environment variable:

A screenshot of a computer program

Description automatically generated

Load Marketing and Technical Data files :

A screen shot of a computer program

Description automatically generated

Function to upload CSV data to an SQLite database

A screen shot of a computer code

Description automatically generated