**Brief Documentation & Other Questions**

***Design Decisions:***

1. ***Separation of Concerns*:** The codebase is divided into multiple modules to separate different concerns. The **scraper.py** module handles the scraping logic, the **product.py** module defines the Product class to model product data, and the **data\_saver.py** module contains functionality to save extracted data into JSON files. This separation enhances code readability, maintainability, and reusability.
2. ***Error Handling:*** Error handling is implemented in critical sections of the code, such as file operations and JSON decoding. Specific exceptions like **OSError** and **JSONDecodeError** are caught individually to provide meaningful error messages to the user. Additionally, a generic **Exception** block is used to catch any unexpected errors.
3. ***Modularity:*** Each module encapsulates specific functionality, making it easier to understand and modify. The **scraper.py** module focuses on scraping data from Amazon, the **product.py** module defines the Product class, and the **data\_saver.py** module handles data saving operations.
4. ***Configuration:*** The **scraper.py** module allows customization of user agents, proxies, and headers to enhance scraping reliability and prevent blocking by websites. These configurations can be easily adjusted based on specific requirements.

***Dependencies:***

* Python 3.x
* Requests library for HTTP requests
* BeautifulSoup library for web scraping
* **query\_reader.py** for reading input queries (Assumed to be provided)

***How to Run the Scraper:***

* Ensure Python 3.x is installed on your system.
* Create a Virtual Environment.
* Install the required dependencies using pip:  
  pip install “***requirements.txt*”**
* Place the query\_reader.py file in the input\_file directory (assuming it's provided).
* Execute the main.py file to start the scraping process
* Follow the prompts to enter the input file path containing the queries.
* The scraper will start fetching data from Amazon based on the provided queries and save the extracted data into separate JSON files.

***Note:*** Make sure to adjust any configurations or file paths as needed based on your specific environment and requirements.