**BASE APP:**

I would like to make a test app that will scrape data and save it to a local csv. Here are the requirements:

* The URL we will be scraping is: allmovie.com/showtimes/movies
* I want you to navigate to the url above and I want you to return the full HTML of the movie
* I want a sample of the HTML to be saved as an HTML file so I can check that it works
* Make sure you show the response code
  + To scrape the data, I want you to use the latest version of scrapy
* Ensure all required installs are in requirements.txt
* All code will go in main.py
* Keep the code as short as possible, meaning:
  + No tests
  + Minimal logging (enough so we know it’s working)
* Follow the Zen of python!
* Let me know what questions you have before you begin

**Question 1 (medium difficult):** The code provided in this project is a webscraper that leverages scrapy and navigates to allmovie.com/showtimes/movies. I would like you to identify and retrieve the first 20 movies. For each movie I want you to return:

- Name of the movie  
- Category of the movie (drama, adventure, fantasy, mystery, etc.)  
- Rating of the move (PG-13, Not Rated, R, etc.)  
- The length of the movie (130 min, 120 min, etc.)  
  
I want you to then sort the order of the movies alphabetically from A-Z and store it as a local csv in the app/data folder and name it movie\_output\_<YYYY-MM-DD>.csv  
  
Feel free to review the entire project code before executing to ensure you have a clear understanding for how it works.

**Question 2 (easy difficulty):** I want you to read the csv labeled movie\_output\_<YYYY-MM-DD>.csv and print in the console the following:

* The average length of all movies
* The most common rating (if there is a tie, show both)

The format will look as follows: “The average length of all movies is <INT> minutes. Six movies have the rating of <Rating> which is the most common rating.”

**Question 3 (hard difficulty):** I want you to read the csv labeled movie\_output\_<YYYY-MM-DD>.csv and create an API endpoint where I can fetch all movies. The endpoint will look as follows:

* GET /movies?rating=<rating>
  + This will return all movies that fit the current rating: PG-13, R, Not Rated, etc.
  + Ensure to show me all endpoints so that I can test them
* GET /movies/all
  + This returns all movies

The JSON response will be a list of dictionaries and will look as follows:

[ {‘name’: ‘Name of movie’, ‘rating’: ‘PG-13’, ‘length’: ‘130’}, { …}]

Notice that the length is an int and therefore the “min” and any whitespace needs to be stripped.

Once you are complete, show me the commands to test the various endpoints locally.