

**The Superior University Lahore**

**Faculty of Computer Science & Information**

**Technology**

**Name: Alishba Haroon**

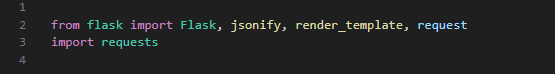
**Roll No: BSAI-116-4C**

**Date: 21 Mar 2025**

**Subject: PAI LAB**

**STOCK PRICE APP**

**1. Importing Libraries**

****

* Flask is used to create the web application.
* render\_template allows rendering an HTML file index.html.
* request handles incoming HTTP requests to the Alpha Vantage API.
* jsonify returns JSON responses.

**2. Creating a Flask App Instance**

****

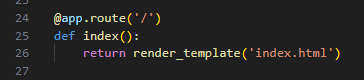
* Initializes a Flask app.
* Stores the API key for Alpha Vantage.

**3. Function to Get Stock Price**

****

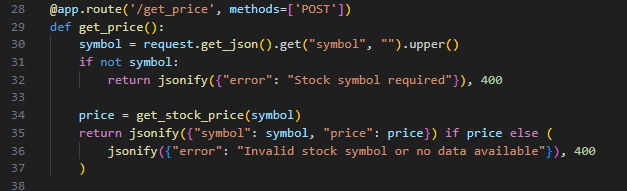
* Makes a GET request to the Alpha Vantage API using the provided symbol (stock ticker).
* The API returns a JSON response containing time-series stock price data.
* The latest available stock price is fetched from "Time Series (1min)", sorted by time.
* Extracts the "4. close" value (closing price) and rounds it to 2 decimal places.
* If the request fails (invalid symbol or no data available), the function returns None.

**4. Route for Homepage**

****

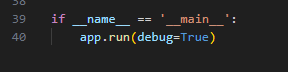
* Serves an HTML page (index.html) when the root URL (/) is visited.
* This page will contain a form where users can enter a stock symbol.

**5. API Route to Fetch Stock Prices**

****

* Accepts POST requests at /get\_price (AJAX or API calls).
* Extracts the stock symbol from the request JSON payload.
* Converts the symbol to uppercase (to match API requirements).
* Calls get\_stock\_price(symbol) to fetch the latest stock price.
* If a valid price is found, returns { "symbol": "AAPL", "price": 150.25 } in JSON format.
* If the symbol is missing or invalid, returns { "error": "Invalid stock symbol or no data available" } with a 400 Bad Request status.

**6. Running the Flask App**

****

* Runs the Flask server in debug mode, allowing for real-time updates.