Brief Report: Live Weather Forecast Web Application

Objective

The goal of this project is to build a simple web application that integrates with a third-party weather API to display current weather data and a 5-day weather forecast. The application uses Python Flask for the backend and jQuery for frontend interactions.

Details

- **API Used:** OpenWeatherMap, This API was used to fetch the current weather data based on the city name provided by the user.
- **Tools:**
    - **Frontend:**

      HTML: Used to structure the web pages.

      CSS: Applied to style the user interface.

      JavaScript: For DOM manipulation and making API requests.

    - **Backend:** Python Flask and used for handling API requests and serving the web application.

Functionality

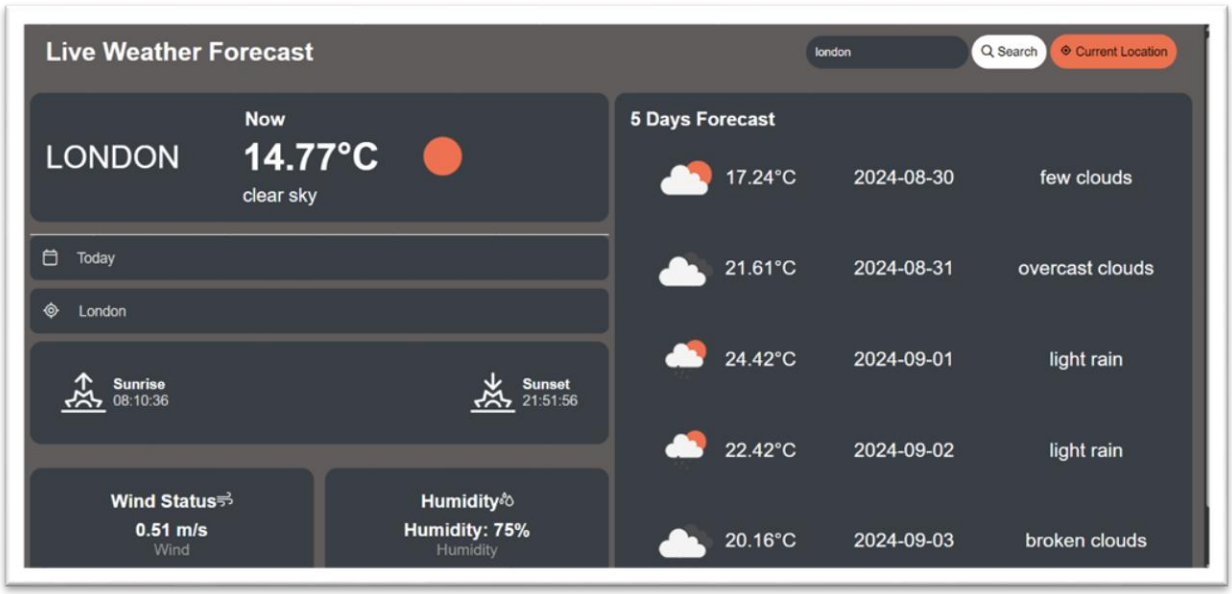
1. **Current Weather Information:**
    - The interface was designed with simplicity in mind. Upon loading the page, the application automatically retrieves and displays weather data based on the user's live location, including temperature, weather description, humidity, wind speed, sunset, and sunrise times.
    - Users can also input a city name to retrieve weather information for that specific location. If an invalid city name is entered, an error message is shown.
2. **5-Day Weather Forecast:**
    - Added functionality to display a 5-day weather forecast alongside the current weather. The forecast is shown in a user-friendly format, providing detailed weather predictions for the upcoming days.
3. **User Interface:**
    - Two main buttons:

- **Search Button:** Allows users to enter a city name and fetch weather data.
- **Current Location Button:** Retrieves weather data based on the user's current geographical location.

4. **Error Handling:**
    - Proper error handling is implemented to manage invalid city names or API errors.

Weather App User Interface Screenshot:

Here is a screenshot of the user interface of the weather application:



Code Access

For accessing the source code and detailed implementation of the Live Weather Forecast application, please visit the GitHub repository:

GitHub Repository Link

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