Weather Dashboard

This project is a **Weather Dashboard** that allows users to get real-time weather forecasts for any city. The app displays weather data, visualizes it with interactive charts, and provides a simple chatbot interface to answer user queries.

**Features:**

* **City Weather Search**: Users can search for a city to get a 5-day weather forecast.
* **Real-time Data**: Fetches weather data using the OpenWeather API.
* **Weather Display**: Shows current weather conditions like temperature, humidity, and wind speed.
* **Interactive Charts**: Includes a vertical bar chart, doughnut chart, and line chart to display temperature trends and weather conditions.
* **Forecast Table**: Displays the 5-day weather forecast in a table format.
* **Chatbot**: Users can ask the chatbot about the weather in different cities or general queries.

**Technologies Used:**

* **HTML**: Structure of the weather dashboard.
* **CSS**: Styling for the layout, sidebar, and weather display.
* **JavaScript**: Logic for fetching weather data, displaying it, and rendering charts.
* **Chart.js**: Used to generate interactive charts for visualizing weather data.
* **OpenWeather API**: Fetches real-time weather data.
* **Gemini API**: (Placeholder in code) for handling general chatbot queries.

**Project Structure:**

* index.html # Main HTML file for the website
* tables.html # Separate HTML file for displaying weather tables
* app.js # Main JavaScript file that handles API calls, charts, and chatbot logic
* style.css # CSS file that styles the layout and components
* logo.png # Logo of the weather app
* user-profile.png # Placeholder for the user profile image
* cloudy.jpg # Weather-related background images (for different weather conditions)

**How to Use:**

1. **Search for a City**: Enter the name of a city in the search bar and click on the **"Get Weather"** button.
2. **View Weather Data**: The weather display will update to show the current weather conditions, and charts will visualize the temperature trends.
3. **Check the Forecast**: A table below the weather display shows the 5-day forecast with dates, temperatures, and weather conditions.
4. **Use the Chatbot**: You can ask questions in the chatbot. If you ask about the weather, specify the city (e.g., "What's the weather in London?").

**API Integration:**

**OpenWeather API**

This project uses the OpenWeather API to fetch the 5-day weather forecast for a city. The fetched data includes:

* Temperature (in °C)
* Weather conditions (clear, cloudy, rainy, etc.)
* Humidity levels
* Wind speed

To use the API, you need to sign up on OpenWeather and get an API key. Update the apiKey variable in app.js with your own key.

**Gemini API (Optional)**

For chatbot responses, the Gemini API is used as a placeholder to fetch responses to user queries. You can replace this with any AI chatbot or natural language processing API that fits your needs.

**Charts and Visualizations**

* **Bar Chart**: Displays the forecasted temperature for the next 5 days.
* **Doughnut Chart**: Visualizes the occurrence of different weather conditions (cloudy, rainy, clear).
* **Line Chart**: Shows a line graph of the temperature trends over 5 days.

These charts are created using the [Chart.js](https://www.chartjs.org/) library.

**Customization**

You can customize the following aspects:

* **Weather Backgrounds**: You can update the background images for different weather conditions (cloudy, rainy, clear) by replacing the respective images (cloudy.jpg, rainy.jpg, etc.).
* **Chatbot**: Modify the handleGeneralQuery function in app.js to integrate a different chatbot service.

**License:**

Feel free to use, modify, and distribute it.