WEATHER APPLICATION DOCUMENTATION 🌧

INTRODUCTION

This is a simple Python-based **Weather Application** that fetches real-time weather data for a given city using the **Open Weather Map API**. The application displays key weather details such as **temperature, humidity, wind speed, and weather conditions**.

FEATURES

- ☑ Fetches real-time weather data
- ☑ Displays **temperature (°C), humidity (%), wind speed (m/s), and description**
- ☑ User-friendly **console-based interface**
- ☑ Handles invalid city names and API errors

TECHNOLOGIES USED

- ☑ **Python** – Core programming language
- ☑ **Requests Library** – To make API calls
- ☑ **Open Weather Map API** – Data source for weather information

INSTALLATION AND SETUP

Step 1: Install Python

Ensure Python is installed on your system. Download it from Python.org if needed.

Step 2: Install Dependencies

Use pip to install the required Library - pip install requests

Step 3: Get an Open Weather Map API Key

- Visit Open Weather Map and sign up.
- Generate a free API key from your account.
- Replace "api_key" in the script with your actual API key.

USAGE

Running the Application:

1. Save the script as weather_app.py.
2. Open a terminal or command prompt and run:

   python weather_app.py
3. Enter the name of the city prompted
4. The script will fetch and display the weather details.

Expected Output:

Enter city name: **London**

Weather in **London**:

Temperature: 18°C

Humidity: 72%

Wind Speed: 3.5 m/s

Condition: Clear sky

ERROR HANDLING

Issue	Possible Cause	Solution
Error: City not found or API issue!	Incorrect city name or API key issue	Ensure correct city name & valid API key
requests.exceptions.ConnectionError	No internet connection	Check network connection

FUTURE ENHANCEMENTS

- Add A Gui Using Tkinter
- Save Weather History In Sqlite Or Text File
- Support For Latitude & Longitude-Based Search
- Fetch 5-Day Weather Forecasts

CONCLUSION

This Python-based Weather Application is a simple yet effective tool to retrieve and display weather data using the OpenWeatherMap API. With further enhancements, it can become a more robust weather tracking tool.

Report Prepared By:

Yash Jain

jhotayash@gmail.com

7339615381