Weather Forecast App Documentation

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Overview

This project is a simple desktop Weather Forecast App developed using Python's Tkinter library for the graphical user interface and the OpenWeatherMap API for retrieving real-time weather data based on user input (city name). It provides a minimal but interactive interface to display the current weather, temperature, humidity, and wind speed for any city worldwide.

Features

Simple, user-friendly GUI with Tkinter. Fetches real-time weather information such as: Weather description Temperature (in °C) Humidity (%) Wind speed (meters/sec) Error handling for empty inputs and invalid city names. Displays error dialogs for network issues or faulty responses.

Requirements

Python 3.x pip (Python package manager) requests library tkinter (comes pre-installed with Python) Installation command for requests (run in terminal): pip install requests

Installation & Setup

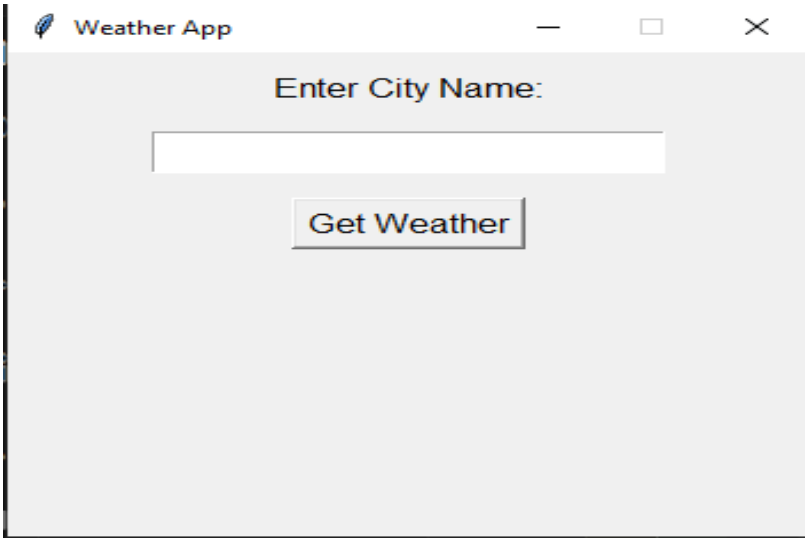
Ensure Python is installed on your computer. Install the requests package:
pip install requests (Optional) Obtain a free API key from OpenWeatherMap. Paste your API key into the API_KEY variable in the code.

Usage

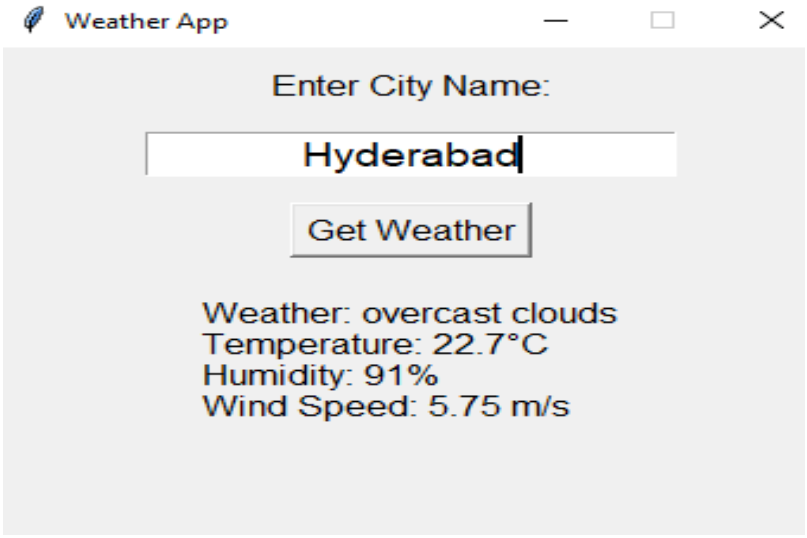
Run the Python script:
python Weather_App.py The GUI window will appear. Enter the name of any city. Click the Get Weather button. The app will display the current weather info below the button.

Application Screenshots

Initial interface when the application starts:



Example: Weather data fetched for Hyderabad:



Code Structure Overview

Section	Purpose
Imports	Import tkinter, requests, and messagebox modules
API_KEY	Stores your OpenWeatherMap API key
get_weather()	Fetches data from the API, handles errors, updates label
GUI Setup	Builds the main window, input entry, button, and result area
mainloop	Starts the Tkinter application loop

Error Handling

Shows an error dialog if city name is empty. Handles network issues and invalid city names. Displays errors as pop-up message boxes.

Troubleshooting

If you see **ModuleNotFoundError: No module named 'requests'**, run:
pip install requests If weather data is not displayed, check your internet connection, API key, and city spelling.

Credits

Developed by Aparna Latha Adabala
Powered by OpenWeatherMap API, Python Tkinter, and requests.