COMMAND LINE WEATHER FORECAST TOOL

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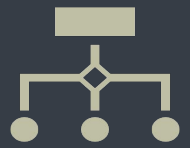
INTRODUCTION

- Weather FORECAST is a powerful command-line tool that delivers accurate and up-to-date weather information for any city around the world.
- Designed for simplicity and efficiency, Weather FORECAST is your go-to weather companion on the command line.

KEY FEATURES

1. **Quick Weather Updates:** Obtain real-time weather information for any city with just a few keystrokes.
2. **Command-Line Interface**: Enjoy a straightforward and intuitive interface accessible through your terminal.
3. **Customization Options**: Tailor the tool to suit your preferences, including temperature units, language settings, and more.
4. **Convenient:** No need to open a browser or use a separate weather application. Get weather updates right from your terminal.
5. **Lightweight:** The tool is lightweight and fast, providing weather information without consuming excessive system resources.
6. **Cross-Platform:** Weather FORECAST works seamlessly on Windows, macOS, and Linux platforms.
7. **Open-Source**: Built with Python and open-source libraries, allowing customization and community contributions.

HIGH LEVEL ARCHITECTURE



User Interface (CLI):

Accepts user input for the city name or any other parameters.

Displays weather information received from the backend.

Backend Service (SCRIPT)

Handles user requests and retrieves weather data.

Communicates with external weather API to fetch the weather information.

Performs data processing, such as parsing and extracting relevant weather data

Handle error handling such as city name not fount, api_key not found

External Weather API (openweathermap):

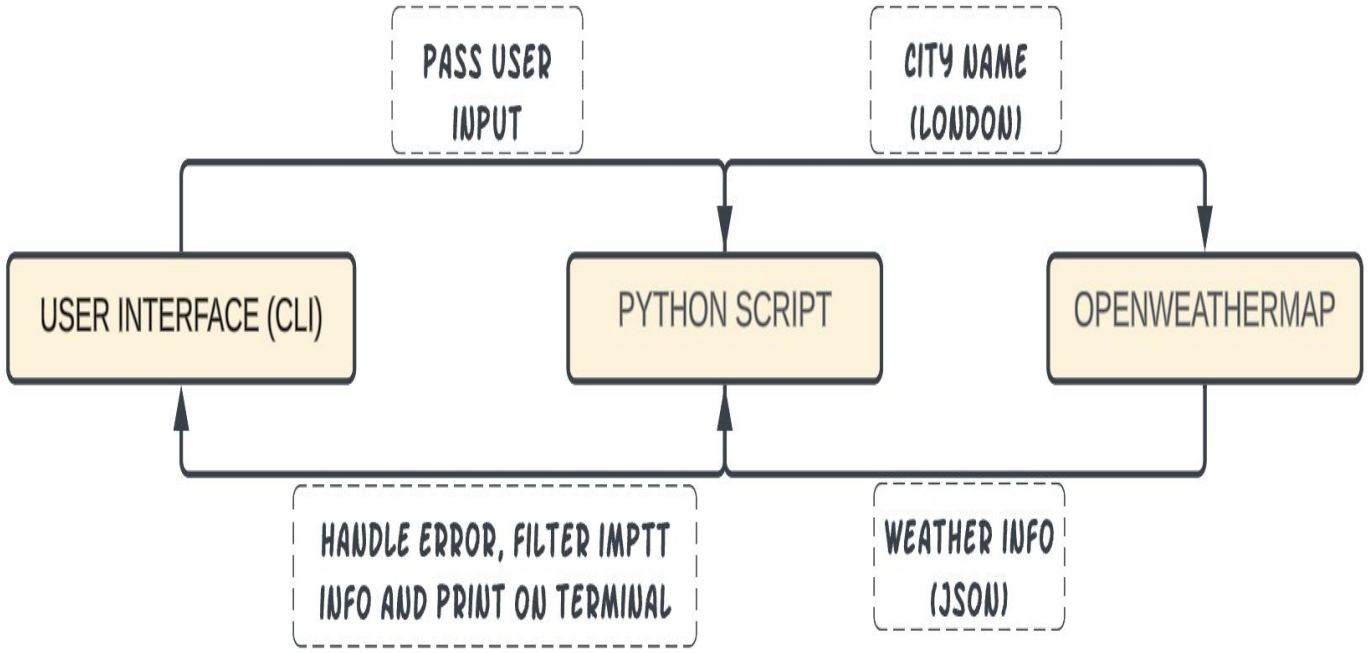
An external API service that provides weather data.

Requires an API key or authentication to access weather information.

```
bparul@bparul-mbp msHackathon % python3 script.py
Welcome to the weather forecast program
Enter the city name:
London

+-------------+-----------------------------------+
| City Name   | London                            |
+-------------+-----------------------------------+
| Country     | GB                                |
+-------------+-----------------------------------+
| main        | Clouds                            |
+-------------+-----------------------------------+
| description | overcast clouds                   |
+-------------+-----------------------------------+
| temp_min    | 15.47 °C                          |
+-------------+-----------------------------------+
| temp_max    | 17.88 °C                          |
+-------------+-----------------------------------+
| Temp        | 16.83 °C                          |
+-------------+-----------------------------------+
| humidity    | 61                                |
+-------------+-----------------------------------+
| Coordinates | {'lat': 51.5085, 'lon': -0.1257}  |
+-------------+-----------------------------------+
| Wind        | {'deg': 60, 'speed': 4.63}        |
+-------------+-----------------------------------+


Do u want to continue? (y/n): y
Enter the city name:
ile
```



MICROSOFT TOOLS USED

Github COPILOT

- used it to create boilerplate code for my script
- Used it to add interactive input from terminal
- Used it to add colors to input/output on terminal
- Used it to display data in tabular form
- Used it to ask questions related to syntax

MICROSOFT POWERPOINT

- Used it to create presentation. I used it first time and found more useful because of slides recommendation

GITHUB

- Used it to search related repo's and gather ideas

CHATGPT

- Used it for improving vocab used in presentation
- Used it to ask questions when wasn't able to get using Github copilot

FUTURE RECOMMENDATIONS

Enhanced User Interface:

- Images could be added along with data displayed on terminal
- Provide options to display weather forecasts for multiple days or specific time intervals.

Internationalization and Localization:

- Support multiple languages to cater to users from different regions.

OPTIMISATION:

- Caching can help reduce the number of API requests and improve response times for repeated queries

Integration with Other Tools or Services:

- Allow integration with other applications or services such as calendars, task managers, or voice assistants.

Geolocation Integration:

- Include geolocation capabilities to automatically determine the user's current location and provide weather information without specifying the city name explicitly.

THANK YOU

OPEN TO SUGGESTIONS:)