



Computer Science Project Synopsis: Weather App in Python

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Grade XI-B*

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Objective

To make a functional and modern weather app in python, that should display the current weather conditions in a desired location.

Overview

We plan to make a weather application using some python modules like 'requests', for getting data from a weather API (we plan to use <https://openweathermap.org>); 'tkbootstrap' for UI (more functional and modern version of the antiquated 'tkinter' module), and 'json' to parse json formatted API information into python readable information. The aim of the app is to explore the possibilities of using publicly available information and combining it with coding skill to make an application that is useful and relevant for our everyday life.

The weather app will have multiple sections, for entering a desired location, fetching the location information, et cetera; all of which will be organised in a user-friendly graphical user interface.

The project will help enhance our knowledge of basic python syntax, and teach us about handling information from databases, and requesting information from public service APIs. The app will prove a useful tool as an insight into how the weather tools we take for granted everyday truly function, and as a reference for future work; hence providing a great utility for any person who uses it.

Language

Python 3.10

Software used

Open Weather Map API: <https://openweathermap.org/api>

One Call API 3.0 (dependency of above): <https://openweathermap.org/api/one-call-3>

Packages and Libraries

tkbootstrap

requests

json

datetime

Skills to be learnt

- Fetching and organising data from online API
- Displaying accurate weather information from available information
- Using tkbootstrap to make a modern and functional UI for the application