

MORADABAD INSTITUTE OF TECHNOLOGY



Weather Forecasting Application

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| Topics To Be Describe:

- Introduction
- Technology Stack
- Modules Used
- Weather API's
- JSON Format Data
- Future Updates about the project
- Q/A



Introduction

Weather forecasting is the application of science and technology to predict the conditions of the atmosphere for a given location and time.

The project's **aim** is to create an application which updates real-time weather and informs about the current status of weather, like **temperature** and **humidity**, for a particular city.

Python programming language is used to achieve this aim. The GUI is created from the **tkinter** module and rest API are called using **requests** module.

OpenWeatherMap API is used in this project to fetch the API data. API consists of data which is stored in JSON format.

Technology Stack



Python



Application Programming
Interface



| Modules Used

```
# importing the libraries  
from tkinter import *  
from tkinter import messagebox  
import requests  
import json  
import datetime  
from PIL import ImageTk, Image
```



Weather API's

1. OpenWeatherMap API
2. Weatherbit API
3. AccuWeather API
4. Dark Sky API
5. Weather2020 API
6. ClimaCell API
7. Visual Crossing API



JSON Format Data

```
{ "coord": {"lon": -122.08,"lat": 37.39},  
  "weather": [ {"id": 800,"main": "Clear","description": "clear sky","icon": "01d"}],  
  "base": "stations",  
  "main": {"temp": 282.55,"feels_like": 281.86,"temp_min": 280.37,"temp_max": 284.26,  
    "pressure":1023,  
    "humidity": 100},  
  "visibility": 16093,  
  "wind": {"speed": 1.5,"deg": 350},  
  "clouds": {"all": 1},  
  "dt": 1560350645,  
  "sys": {"type": 1,"id": 5122,"message": 0.0139,"country": "US","sunrise":1560343627,  
    "sunset":1560396563},  
  "timezone": -25200,  
  "id": 420006353,  
  "name": "Mountain View",  
  "cod": 200 }
```



Future Update Of This Project

Every project has it's future like feature addition, inter-connection with other softwares or re-development using advance GUI's.

This mini project is a part of our major project and obviously we are not going reveal information about it. So have a great day and wait till next year.

THANK
you