

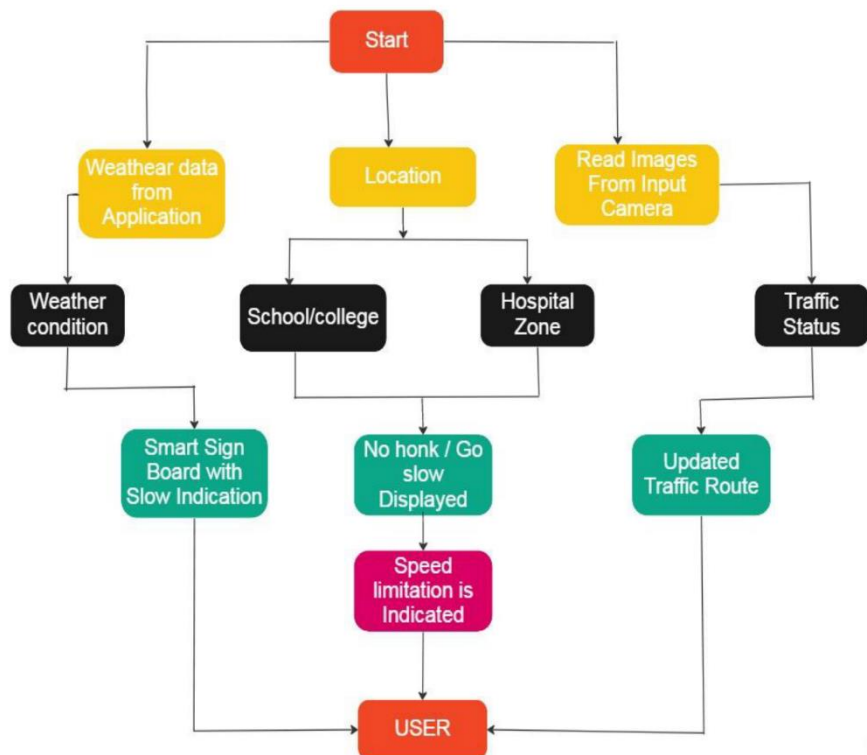
SPRINT 01

Date	27 October 2022
Team ID	PNT2022TMID52873
Project Name	Project – Signs with Smart Connectivity for Better Road Safety

SPRINT GOALS:

1. Create and initialize accounts in various public APIs like OpenWeather API.
2. Write a Python program that outputs results given the inputs like weather and location.

CODE FLOW:



PROGRAM CODE:

Weather.py

This file is a utility function that fetches the weather from OpenWeatherAPI. It returns only certain required parameters of theAPI response.

```
#python code

# import required modules
import requests, json, time

# Enter your API key here
api_key = "46faa4ab6fede1d9ae549b90d91253f2"

# base_url variable to store url
base_url = "http://api.openweathermap.org/data/2.5/weather?"

# Give city name
city_name = input("Enter city name : ")
while(1):
# complete_url variable to store
# complete url address
complete_url = base_url + "appid=" + api_key + "&q=" + city_name

# get method of requests module
# return response object
response = requests.get(complete_url)

# json method of response object
# convert json format data into
# python format data
x = response.json()
```

```
# Now x contains list of nested dictionaries
# Check the value of "cod" key is equal to
# "404", means city is found otherwise,
# city is not found
if x["cod"] != "404":

    # store the value of "main"
    # key in variable y
    y = x['main']

    # store the value corresponding
    # to the "temp" key of y
    current_temperature = y["temp"]

    # store the value corresponding
    # to the "pressure" key of y
    current_pressure = y["pressure"]

    # store the value corresponding
    # to the "humidity" key of y
    current_humidity = y["humidity"]

    # store the value of "weather"
    # key in variable z
    z = x["weather"]

    # store the value corresponding
    # to the "description" key at
    # the 0th index of z
    weather_description = z[0]["description"]

    # print following values
    print(" Temperature (in kelvin unit) = ",(current_temperature))
    print(" Temperature (in celsius unit) = ",round((current_temperature-
273.15),2))
```

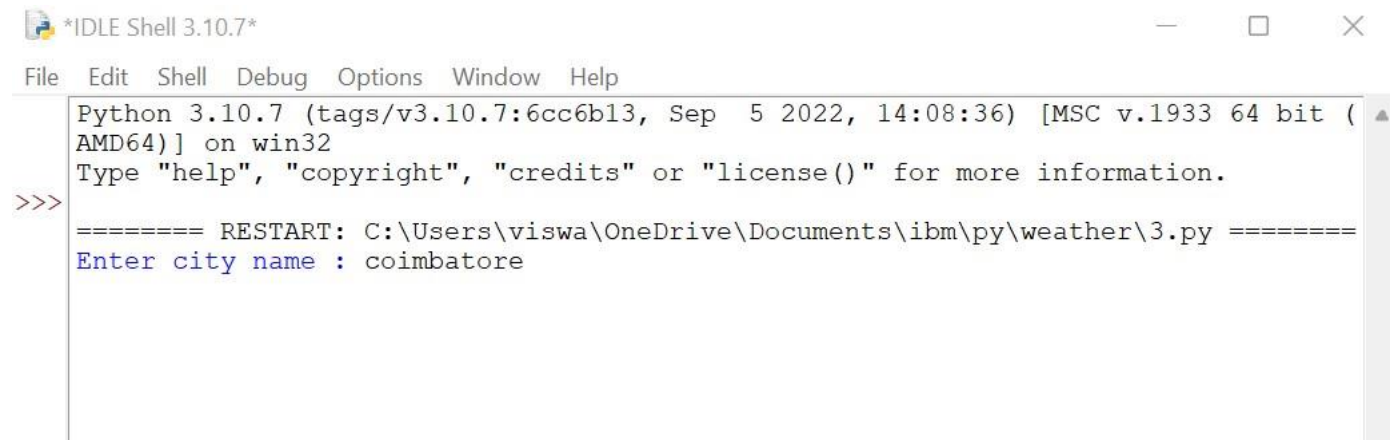
```
print(" atmospheric pressure (in hPa unit) = " +str(current_pressure) )  
print(" humidity (in percentage) = " +str(current_humidity))  
print(" description = " +str(weather_description))
```

```
else:
```

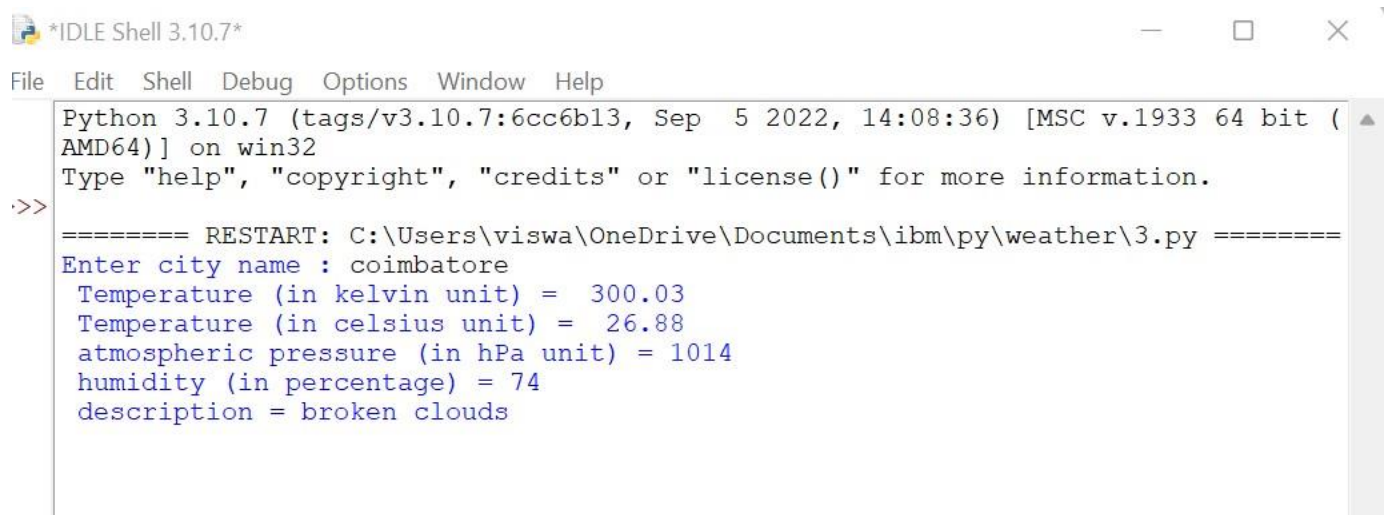
```
print(" City Not Found ")
```

```
time.sleep(2)
```

OUTPUT:

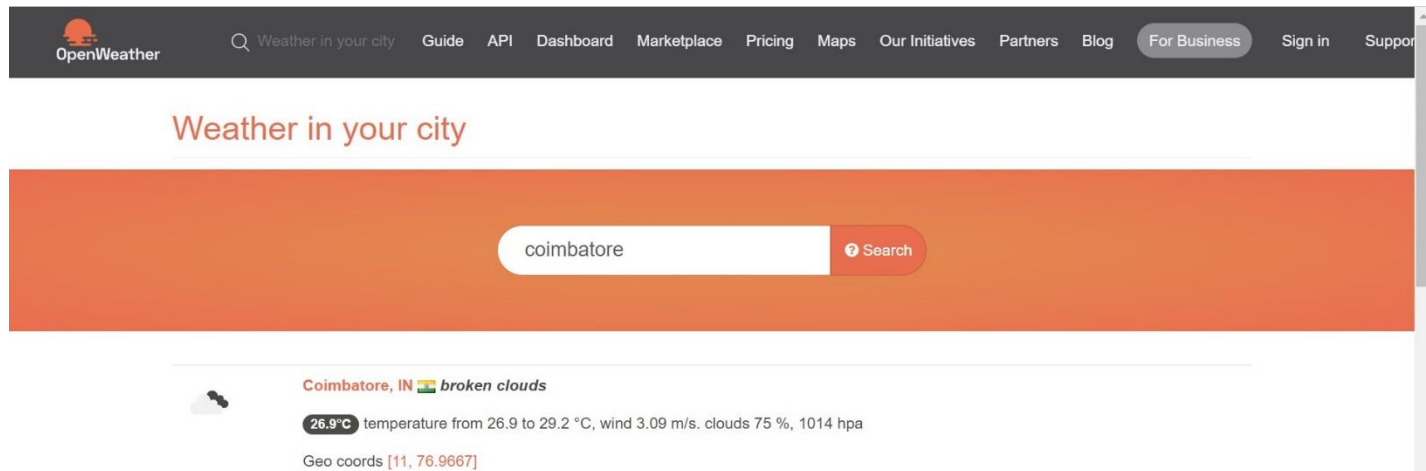


```
*IDLE Shell 3.10.7*
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\viswa\OneDrive\Documents\ibm\py\weather\3.py =====
Enter city name : coimbatore
```



```
*IDLE Shell 3.10.7*
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\viswa\OneDrive\Documents\ibm\py\weather\3.py =====
Enter city name : coimbatore
Temperature (in kelvin unit) = 300.03
Temperature (in celsius unit) = 26.88
atmospheric pressure (in hPa unit) = 1014
humidity (in percentage) = 74
description = broken clouds
```

IN Weather API:



The screenshot shows the OpenWeather website interface. At the top is a dark navigation bar with the OpenWeather logo and links for Weather in your city, Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Sign in, and Support. Below the navigation bar is a large orange banner with the text "Weather in your city". In the center of the banner is a search bar containing the text "coimbatore" and a red "Search" button. Below the banner, the weather data for Coimbatore, India is displayed. It includes a weather icon (clouds with rain), the text "Coimbatore, IN broken clouds", a temperature of 26.9°C, and a description: "temperature from 26.9 to 29.2 °C, wind 3.09 m/s, clouds 75 %, 1014 hpa". At the bottom, the geo-coordinates are listed as [11, 76.9667].

OpenWeather

Weather in your city

Guide API Dashboard Marketplace Pricing Maps Our Initiatives Partners Blog For Business Sign in Support

Weather in your city

coimbatore Search

Coimbatore, IN broken clouds

26.9°C temperature from 26.9 to 29.2 °C, wind 3.09 m/s, clouds 75 %, 1014 hpa

Geo coords [11, 76.9667]

Search engine is very flexible. How it works:

- To make it more precise put the city's name, comma, 2-letter country code (ISO3166). You will get all proper cities in chosen country. The order is important - the first is city name then comma then country. Example - London, GB or New York, US.