

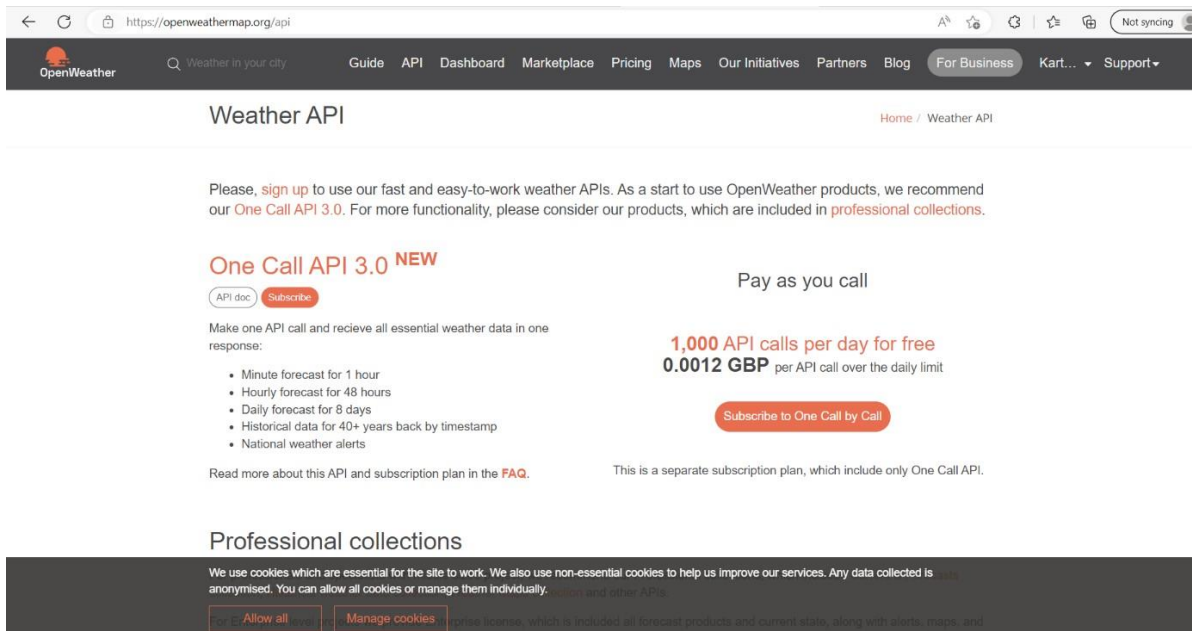
# Develop a python Script

Date	12 November 2022
Team ID	PNT2022TMID29179
Project Name	Signs with smart connectivity for Better road safety
Maximum Marks	4 Marks

## Create a code snippet using python compiler

1. Extract weather data from Open Weather Map using APIs
2. Send the extracted data to the cloud
3. Receive data from the cloud and view it in the python compiler

### 1. Extract weather data from OpenWeatherMap using APIs:



The screenshot shows the OpenWeatherMap API page. The browser address bar displays 'https://openweathermap.org/api'. The page header includes the OpenWeather logo, a search bar, and navigation links: Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Kart..., and Support. The main heading is 'Weather API'. Below this, a paragraph explains that users should sign up to use the fast and easy-to-work weather APIs, recommending the 'One Call API 3.0' for more functionality. The 'One Call API 3.0' is highlighted with a 'NEW' badge. A 'Pay as you call' section offers '1,000 API calls per day for free' and '0.0012 GBP per API call over the daily limit'. A 'Subscribe to One Call by Call' button is present. A list of features for the One Call API includes: Minute forecast for 1 hour, Hourly forecast for 48 hours, Daily forecast for 8 days, Historical data for 40+ years back by timestamp, and National weather alerts. A link to the FAQ is provided for more information. The 'Professional collections' section is partially visible at the bottom. A cookie consent banner is at the very bottom, stating that cookies are used for site functionality and improvement, with options to 'Allow all' or 'Manage cookies'.

Weather API

Please, [sign up](#) to use our fast and easy-to-work weather APIs. As a start to use OpenWeather products, we recommend our [One Call API 3.0](#). For more functionality, please consider our products, which are included in [professional collections](#).

**One Call API 3.0** NEW

[API doc](#) [Subscribe](#)

Make one API call and receive all essential weather data in one response:

- Minute forecast for 1 hour
- Hourly forecast for 48 hours
- Daily forecast for 8 days
- Historical data for 40+ years back by timestamp
- National weather alerts

Read more about this API and subscription plan in the [FAQ](#).

**Pay as you call**

**1,000 API calls per day for free**  
**0.0012 GBP** per API call over the daily limit

[Subscribe to One Call by Call](#)

This is a separate subscription plan, which include only One Call API.

**Professional collections**

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## 2. Send the extracted data to the cloud:

OpenWeather

Weather in your city

Guide API Dashboard Marketplace Pricing Maps Our Initiatives Partners Blog For Business Kart... Support

Weather in your city

Chennai Search

Chennai, IN mist

30°C temperature from 30 to 30 °C, wind 2.57 m/s, clouds 75 %, 1014 hpa

Geo coords [13.0878, 80.2785]

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.

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## 3. Receive data from the cloud and view it in the python compiler:

```
File Edit Format Run Options Window Help
import requests
a = "https://api.openweathermap.org/data/2.5/weather?q=Chennai,IN&appid=6d13d12f9cd34a07871a5795d01e2c47"
r = requests.get(url = a)
data = r.json()
print(r)
print(data)
temp = data["main"]["temp"]
hum = data["main"]["humidity"]
print("Temperature is : ",temp)
print("Humidity is : ",hum)
```

```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
<Response [200]>
Temperature is : 298.14
>>>
===== RESTART: E:/IBM/pre/weatherMap.py =====
=====
<Response [200]>
{'coord': {'lon': 80.2785, 'lat': 13.0878}, 'weather': [{'id': 701, 'main': 'Mist', 'description': 'mist', 'icon': '50n'}, {'id': 500, 'main': 'Rain', 'description': 'light rain', 'icon': '10n'}], 'base': 'stations', 'main': {'temp': 298.14, 'feels_like': 299.15, 'temp_min': 298.14, 'temp_max': 298.14, 'pressure': 1012, 'humidity': 94}, 'visibility': 2500, 'wind': {'speed': 1.54, 'deg': 350}, 'rain': {'1h': 0.12}, 'clouds': {'all': 75}, 'dt': 1667317416, 'sys': {'type': 1, 'id': 9218, 'country': 'IN', 'sunrise': 1667262751, 'sunset': 1667304738}, 'timezone': 19800, 'id': 1264527, 'name': 'Chennai', 'cod': 200}
Temperature is : 298.14
Humidity is : 94
>>>
```