

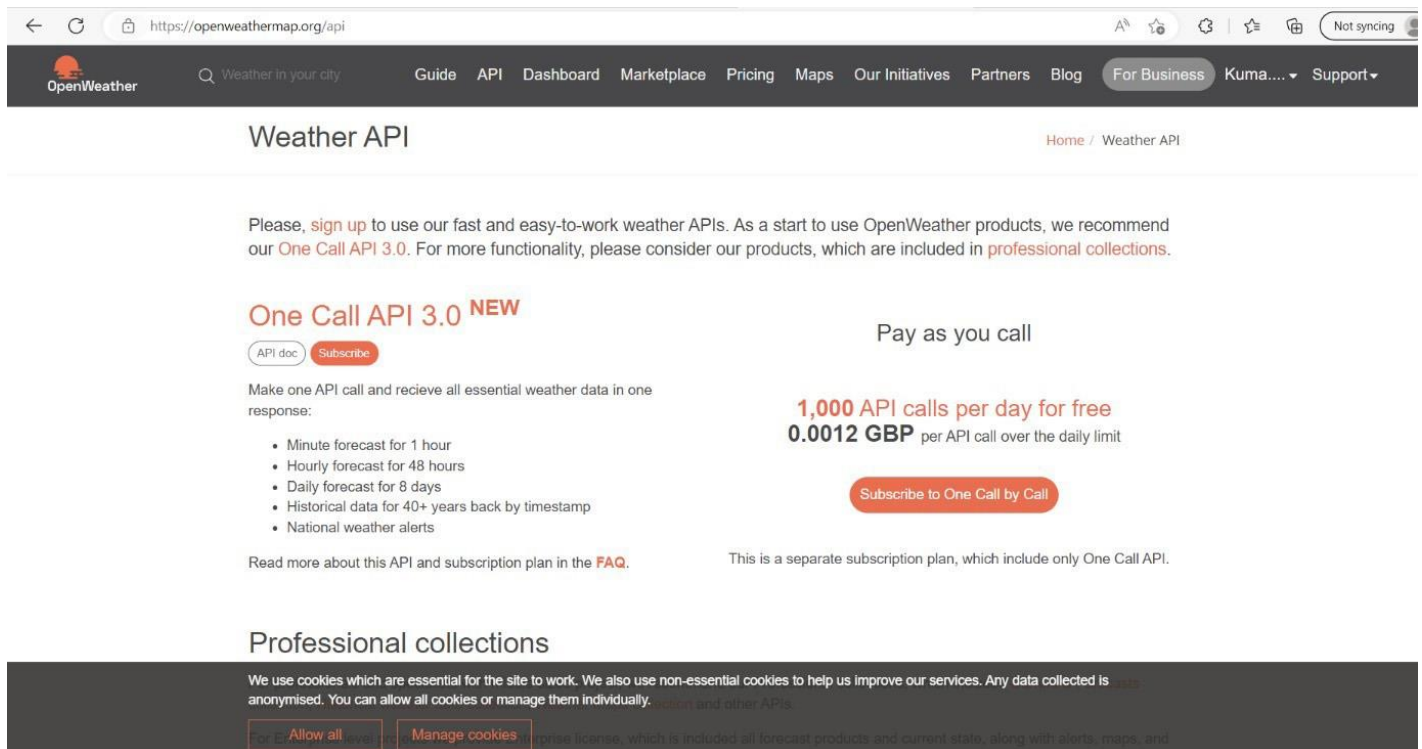
# Develop a python Script

Date	13 November 2022
Team ID	PNT2022TMID33544
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 OpenWeatherMap 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, Kuma..., and Support. The main heading is 'Weather API' with a breadcrumb 'Home / Weather API'. The content area explains the API and offers two subscription plans. The 'One Call API 3.0' plan is highlighted as 'NEW' and includes a 'Subscribe' button. It lists features: 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. The 'Pay as you call' plan offers '1,000 API calls per day for free' and '0.0012 GBP per API call over the daily limit', with a 'Subscribe to One Call by Call' button. A footer section titled 'Professional collections' contains a cookie consent message and 'Allow all' and 'Manage cookies' buttons.

OpenWeather

Weather in your city

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

## Weather API

Home / 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 includes only One Call API.

### Professional collections

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

OpenWeather

Weather in your city

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### 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
>>>
```