

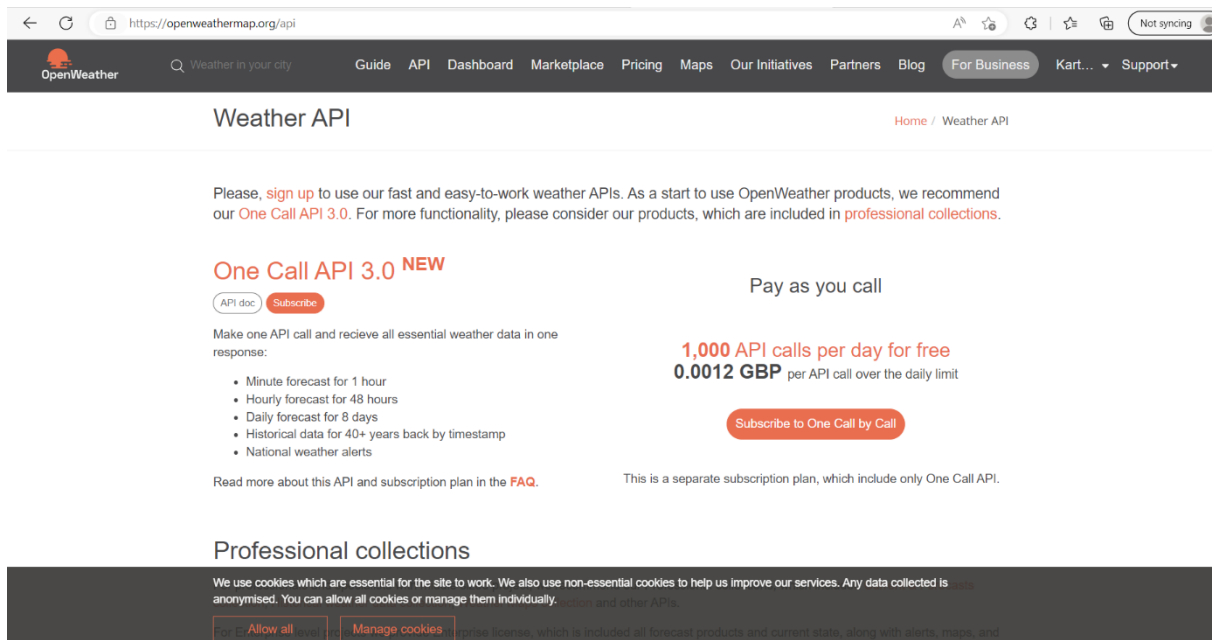
Develop a python Script

Date	13 November 2022
Team ID	PNT2022TMID14352
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 in a web browser. The browser's address bar displays the URL <https://openweathermap.org/api>. The page features a dark navigation bar with the OpenWeather logo, a search bar, and various menu items including Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Kart..., and Support. The main heading is "Weather API", with a breadcrumb trail "Home / Weather API". The content area explains that users should sign up to use the fast and easy-to-work weather APIs. It recommends the "One Call API 3.0" and lists its 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. A pricing section states "Pay as you call" with "1,000 API calls per day for free" and "0.0012 GBP per API call over the daily limit". A button "Subscribe to One Call by Call" is present. A note mentions that this is a separate subscription plan including only One Call API. Below this, there is a section for "Professional collections". At the bottom, a cookie consent banner is visible, stating that cookies are used for site functionality and improvement, with options to "Allow all" or "Manage cookies".

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
>>>
```