

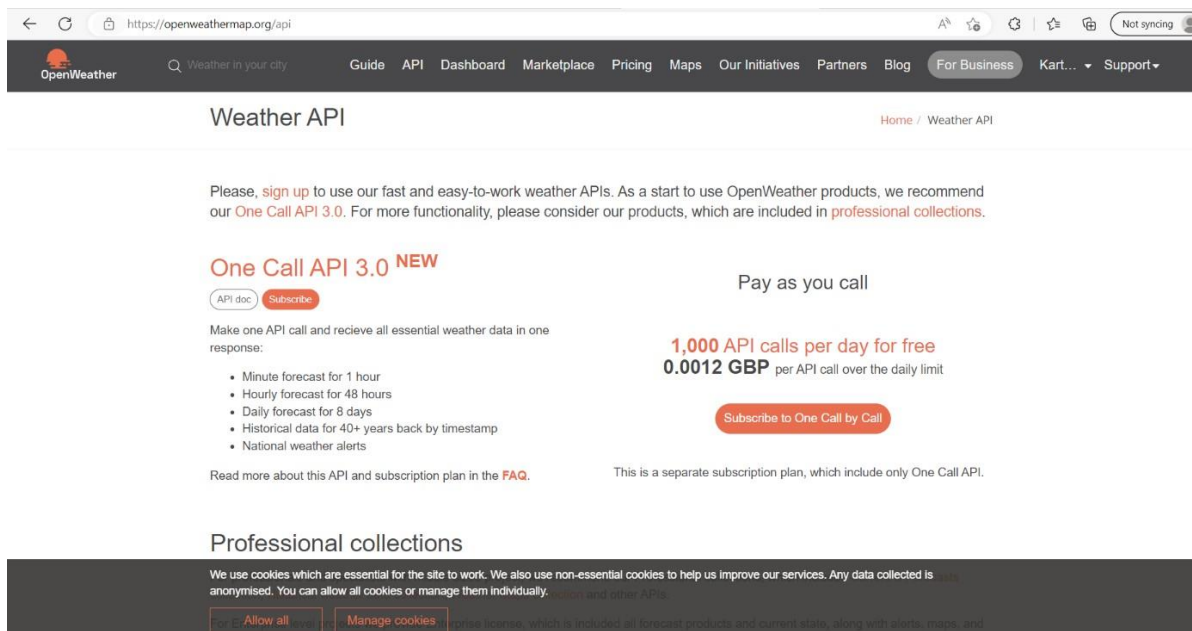
Develop a python Script

Date	13 November 2022
Team ID	PNT2022TMID33549
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, Kart..., and Support. The main heading is 'Weather API'. Below this, a paragraph explains that users should sign up to use the APIs and recommends the 'One Call API 3.0'. A list of features for the One Call API is provided: 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 for 'Pay as you call' shows '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. At the bottom, there is a section for 'Professional collections' and a cookie consent banner with 'Allow all' and 'Manage cookies' buttons.

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](#)

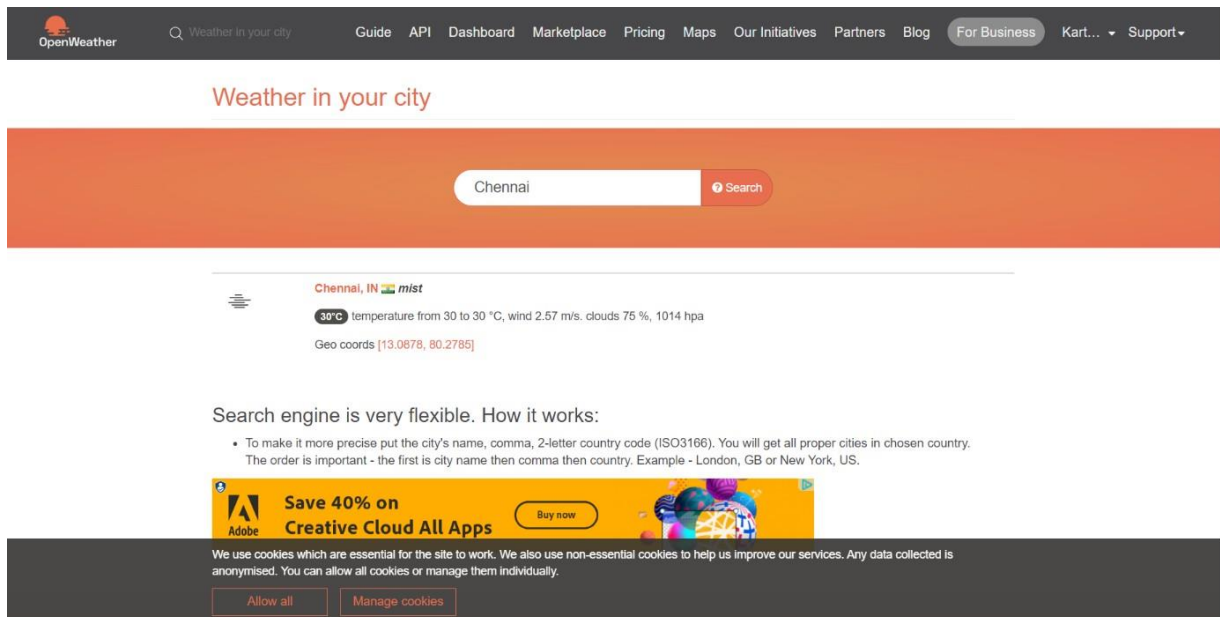
This is a separate subscription plan, which includes only One Call API.

Professional collections

We use cookies which are essential for the site to work. We also use non-essential cookies to help us improve our services. Any data collected is [anonymous](#). You can allow all cookies or manage them individually. [Learn more about our privacy policy](#)

[Allow all](#) [Manage cookies](#)

2. Send the extracted data to the cloud:



The screenshot shows the OpenWeather website interface. At the top, there's a navigation bar with links like Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, and Support. Below the navigation bar, the main heading is "Weather in your city". A search bar contains the text "Chennai" and a "Search" button. Below the search bar, the weather data for Chennai, IN is displayed, including a temperature of 30°C, a description of "mist", and various weather details like wind speed, clouds, and hpa. Below the weather data, there's a section titled "Search engine is very flexible. How it works:" with a bullet point explaining the search format. At the bottom, there's a banner for Adobe Creative Cloud All Apps with a "Buy now" button. A cookie consent banner is also visible at the very bottom.

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
>>>
```