

Develop a python Script

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Team ID	PNT2022TMID45401
Project Name	Signs with smart connectivity for Better road safety
Maximum Marks	4 Marks

Submitted by:

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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 and navigation links: Weather in your city, Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Kart..., and Support. The main heading is 'Weather API' with a breadcrumb 'Home / Weather API'. The content area explains that users should sign up to use the APIs and recommends the 'One Call API 3.0'. 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. Pricing is shown as '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 'Subscribe to One Call by Call' button is present. Below, 'Professional collections' are mentioned. A footer cookie notice is visible at the bottom.

OpenWeatherMap API page showing the One Call API 3.0 and Professional collections.

2.Send te 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
>>>
```