


DEVELOP A PYTHON SCRIPT

Date	13 November 2022
Team ID	PNT2022TMID17531
Project Name	Signs with smart connectivity for better road safety
Marks	4 marks



1. Extract weather data from open Weather map using API

The screenshot shows the OpenWeather API website. The 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 content area is titled 'Weather API' and includes a breadcrumb 'Home / Weather API'. The text explains that users should sign up to use the fast and easy-to-work weather APIs, recommending 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. A 'Pay as you call' section highlights '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 this, the 'Professional collections' section is partially visible, mentioning a separate subscription plan. At the bottom, a cookie consent banner is shown with 'Allow all' and 'Manage cookies' buttons.

2. Send the extracted data to cloud


Weather in your city
Guide
API
Dashboard
Marketplace
Pricing
Maps
Our Initiatives
Partners
Blog
For Business
Kart...
Support

Weather in your city



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 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
>>>

```

Ln: 17 Col: 4