

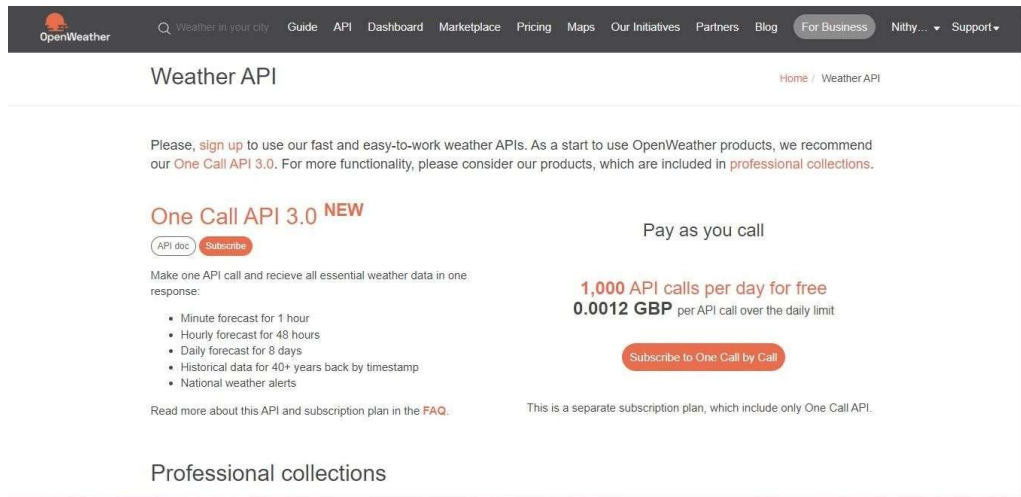
Develop a Python script

Date	31 October 2022
Team ID	PNT2022TMID48245
Project Name	Project - Signs with smart connectivity for Better road safety

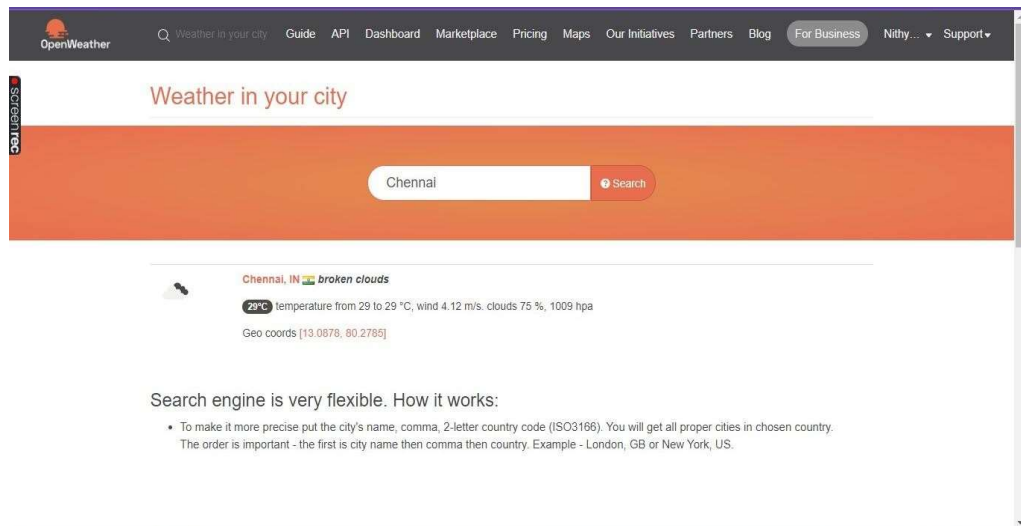
Signs with smart connectivity for Better road safety

Create a code snippet using python to

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



The screenshot shows the OpenWeather API page. The header includes the OpenWeather logo and navigation links: Weather in your city, Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, Nithy..., and Support. The main heading is "Weather API". Below it, a paragraph states: "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." The "One Call API 3.0" is highlighted as "NEW". There are links for "API doc" and "Subscribe". A list of features includes: 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 shows "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. A note mentions that this is a separate subscription plan including only One Call API. The page also has a "Professional collections" section.



The screenshot shows the OpenWeather "Weather in your city" page. The header is identical to the previous screenshot. The main heading is "Weather in your city". Below it is a search bar with "Chennai" entered and a "Search" button. The search results show "Chennai, IN" with a weather icon of broken clouds. The temperature is 29°C, and the forecast is "temperature from 29 to 29 °C, wind 4.12 m/s, clouds 75 %, 1009 hpa". The geo coordinates are [13.0878, 80.2785]. A note states: "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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weatherMap.py - E:/IBM/pre/weatherMap.py (3.6.5)
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)
```

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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: 10 Col: 26