

Develop a Python script

Date	12 September 2022
Team ID	PNT2022TMID19820
Project Name	Project – Smart solution for railways
Maximum Marks	4 Marks

Smart solution for railways

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 a web browser window with multiple tabs. The active tab is 'home.openweathermap.org'. The website header includes the OpenWeather logo and navigation links: Weather in your city, Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, yoge..., and Support. A green confirmation message states: 'We have sent the confirmation link to yogeshk0333@gmail.com. Please check your email.' Below this, a navigation bar lists: New Products, Services, API keys, Billing plans, Payments, Block logs, My orders, My profile, and Ask a question. The main content area features a large image of a sunset over a body of water. To the right of the image, the text reads: 'Historical weather for any location'. Below this, it says: 'Our new technology, Time Machine, has allowed us to enhance the data in the Historical Weather Collection.' Two bullet points follow: 'Historical weather data available for ANY coordinate' and 'The depth of historical data have been extended to 40 YEARS'. Below the bullet points, it says: 'You can download data from Personal account or contact us to order it.' At the bottom of this section are two buttons: 'Learn more' and 'Go to purchase'. At the very bottom of the page, there is a 'Weather Dashboard' section with a description: 'The OpenWeather Dashboard is a lightweight and flexible visual tool for our customers who would'. On the right side of the dashboard section, there is a 'Activate Windows' watermark: 'Activate Windows Go to Settings to activate Windows.'

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openweathermap.org/find?utf8=✓&q=chennai

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Weather in your city

chennai Search

Chennai, IN scattered clouds

31°C temperature from 31 to 31 °C, wind 4.63 m/s, clouds 40 %, 1010 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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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)
```

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

Ln: 10 Col: 26