

## Develop a Python script

Date	14 November 2022
Team ID	PNT2022TMID42348
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, a search bar, and navigation links like Guide, API, Dashboard, Marketplace, Pricing, Maps, Our Initiatives, Partners, Blog, For Business, and Support. A green confirmation message states: 'We have sent the confirmation link to yogeshk0333@gmail.com. Please check your email.' Below this is a navigation bar with links: 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 brief description and an 'Activate Windows' watermark.

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

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

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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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29°C Cloudy

weatherMap.py - E:/IBM/pre/weatherMap.py (3.6.3)  
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
>>>
```