

## Develop a Python script

Date	08 NOVEMBER 2022
Team ID	PNT2022TMID12770
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 the OpenWeatherMap website. At the top, there's a navigation bar with links like 'Weather in your city', 'Guide', 'API', 'Dashboard', 'Marketplace', 'Pricing', 'Maps', 'Our Initiatives', 'Partners', 'Blog', 'For Business', 'yoge...', and 'Support'. Below the navigation bar, a green message box states: 'We have sent the confirmation link to yogeshk0333@gmail.com. Please check your email.' Below this, there's a section titled 'Historical weather for any location' with a description: 'Our new technology, Time Machine, has allowed us to enhance the data in the Historical Weather Collection.' It lists two bullet points: 'Historical weather data available for ANY coordinate' and 'The depth of historical data have been extended to 40 YEARS'. There are two buttons: 'Learn more' and 'Go to purchase'. At the bottom, there's a 'Weather Dashboard' section with a description: 'The OpenWeather Dashboard is a lightweight and flexible visual tool for our customers who would'. The Windows taskbar is visible at the bottom with the time 12:54 PM.

The screenshot shows the OpenWeatherMap website. At the top, there's a navigation bar with links like 'Weather in your city', 'Guide', 'API', 'Dashboard', 'Marketplace', 'Pricing', 'Maps', 'Our Initiatives', 'Partners', 'Blog', 'For Business', 'yoge...', and 'Support'. Below the navigation bar, there's a section titled 'Weather in your city' with a search bar containing 'chennai' and a 'Search' button. To the right of the search bar, there's a dropdown menu with options: 'My services', 'My API keys', 'My payments', 'My profile', and 'Logout'. Below the search bar, there's a weather forecast for Chennai, IN, showing 'scattered clouds', a temperature of 31°C, and a description: 'temperature from 31 to 31 °C, wind 4.63 m/s, clouds 40 %, 1010 hpa'. The Geo coords are [13.0878, 80.2785]. Below the weather forecast, there's a section titled 'Search engine is very flexible. How it works:' with a bullet point: '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.' At the bottom, there's a Plesk advertisement with the text 'Control & Simplify your WebOps' and a 'SIGN UP' button. The Windows taskbar is visible at the bottom with the time 02:14 PM and date 04-11-2022.

```
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

&lt;Response [200]&gt;

Temperature is : 298.14

&gt;&gt;&gt;

===== RESTART: E:/IBM/pre/weatherMap.py =====

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&lt;Response [200]&gt;

```
{'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

&gt;&gt;&gt;

Ln: 17 Col: 4