

Develop a Python script

Team ID	PNT2022TMID28660
Project Name	SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITIAN CITIES
Maximum Marks	4 Marks

SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITIAN CITIES

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 in a web browser. The address bar displays 'home.openweathermap.org'. A green notification box at the top center says 'Signed in successfully.' Below it, a pink banner states: 'You have to verify your email to use OpenWeatherMap services. Please [click here](#) to get an email with the confirmation link.' The main navigation bar includes links like 'Weather in your city', 'Guide', 'API', 'Dashboard', 'Marketplace', 'Pricing', 'Maps', 'Our Initiatives', 'Partners', 'Blog', 'For Business', 'Jerin', and 'Support'. Below the navigation bar, there's a section titled 'Historical weather for any location' with a description of the 'Time Machine' technology and a list of features: 'Historical weather data available for ANY coordinate' and 'The depth of historical data have been extended to 40 YEARS'. At the bottom of this section are two buttons: 'Learn more' and 'Go to purchase'. The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons, along with system information like '30°C Cloudy' and the date '08-11-2022'.

Find - OpenWeatherMap

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

Easy to use Online...

OpenWeather

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

Weather in your city

Madurai Search

Madurai, IN 🇮🇳 haze

30°C temperature from 30 to 30 °C, wind 3.6 m/s, clouds 40 %, 1013 hpa

Geo coords [9.9333, 78.1167]

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Type here to search

30°C Cloudy 12:13 08-11-2022

Members

home.openweathermap.org

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Historical weather for any location

Our new technology, Time Machine, has allowed us to enhance the data in the **Historical Weather Collection**.

- Historical weather data available for **ANY** coordinate
- The depth of historical data have been extended to **40 YEARS**

You can download data from **Personal account** or **contact us** to order it.

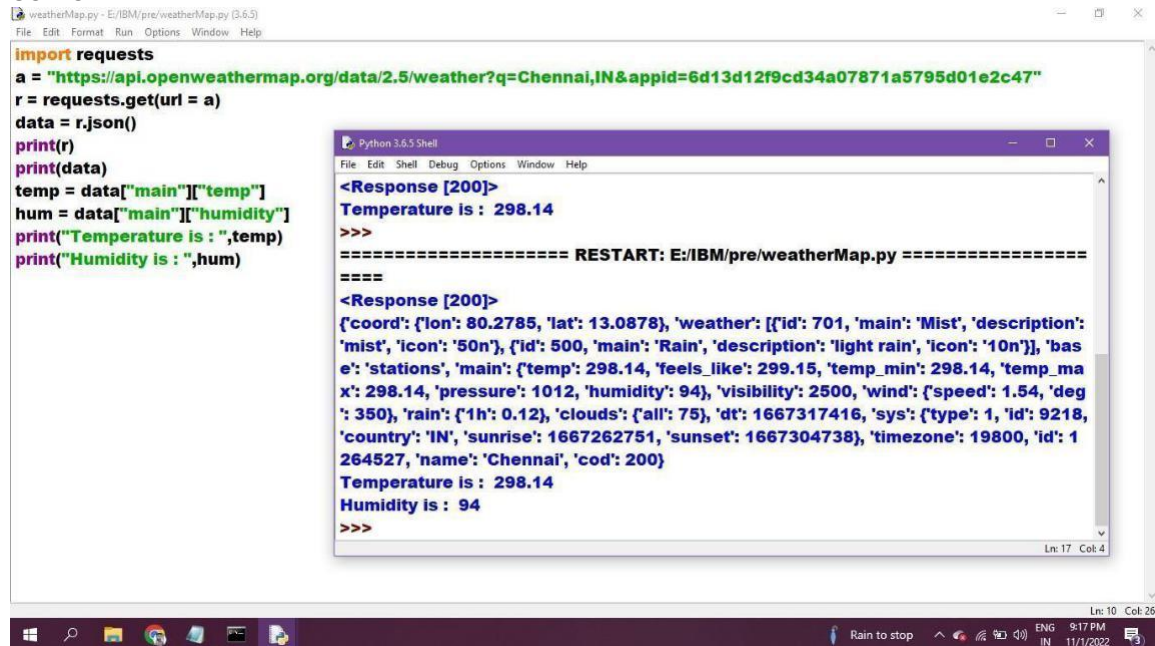
Learn more Go to purchase

Weather Dashboard

Type here to search

30°C Cloudy 12:16 08-11-2022

OUTPUT:



The image shows a screenshot of a Windows desktop environment. On the left, a text editor window titled 'weatherMap.py - E:/IBM/pre/weatherMap.py (3,6,5)' contains the following Python code:

```
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)
```

On the right, a 'Python 3.6.5 Shell' window displays the output of the script. It shows the raw JSON response from the OpenWeatherMap API for Chennai, India, followed by the temperature and humidity values extracted from the JSON.

```
<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
>>>
```

The Windows taskbar at the bottom shows the system clock as 9:17 PM on 11/1/2022, with the language set to English (India). A notification for 'Rain to stop' is also visible.