

Develop a Python script

Team ID	PNT2022TMID39665
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 states 'Signed in successfully.' Below it, a pink banner reads: '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 for '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 and the heading 'Historical weather for any location'. Below this, text describes the 'Time Machine' technology and lists features: 'Historical weather data available for ANY coordinate' and 'The depth of historical data have been extended to 40 YEARS'. Two buttons, 'Learn more' and 'Go to purchase', are visible at the bottom of the content area. The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons, along with system information: 30°C Cloudy, 12:11, 08-11-2022.

Find - OpenWeatherMap

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

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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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New Products Services API keys Billing plans Payments Block logs My orders My profile Ask a question

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.

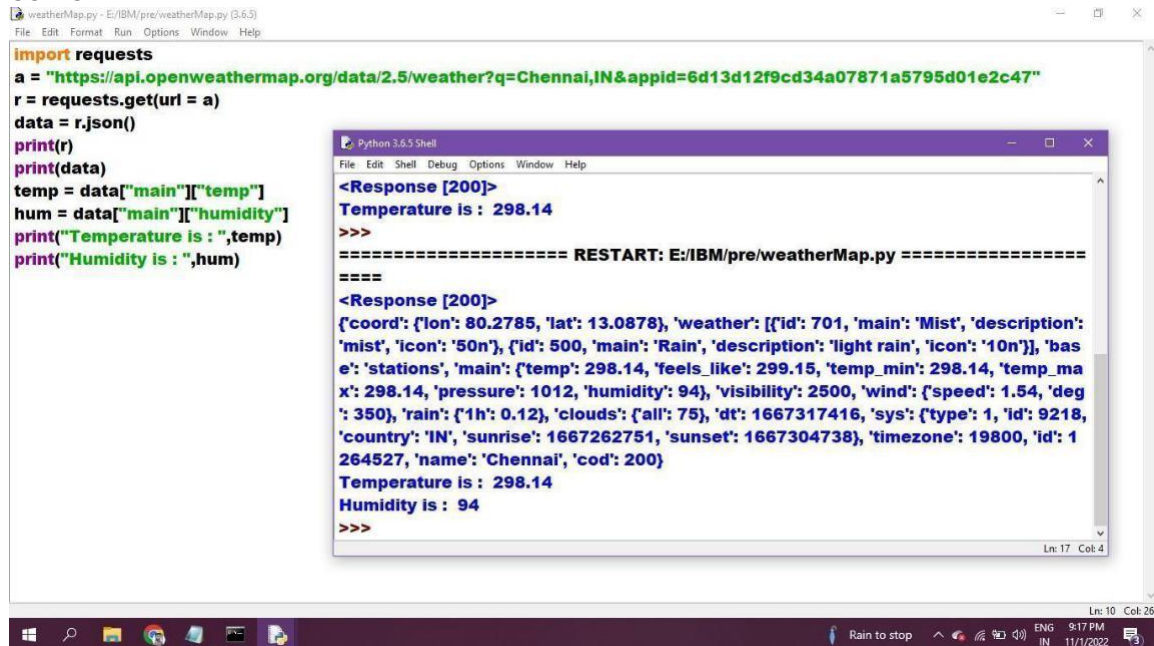
Learn more Go to purchase

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 (IN). A notification for 'Rain to stop' is visible on the right side of the taskbar.