

Develop a Python script

Date	12 November 2022
Team ID	PNT2022TMID24735
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

S K Vishalsurya :

The screenshot shows a web browser window with the OpenWeatherMap website. The browser's address bar shows 'home.openweathermap.org'. A green confirmation message at the top states: 'We have sent the confirmation link to saravanasudhansubramanian2002@gmail.com. Please check your email.' Below this, a 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 over a body of water. To the right of the image, the text reads 'Historical weather for any location' followed by 'Our new technology, Time Machine, has allowed us to enhance the data in the Historical Weather Collection.' Below this, two bullet points state: 'Historical weather data available for ANY coordinate' and 'The depth of historical data have been extended to 40 YEARS'. A note mentions that data can be downloaded from a 'Personal account' or by 'contact us to order it.' Two orange buttons, 'Learn more' and 'Go to purchase', are positioned at the bottom of the promotional text. The Windows taskbar at the bottom shows the date as 03-11-2022 and the time as 21:23.

The screenshot shows the OpenWeatherMap website in a web browser. The URL is `openweathermap.org/find?utf8=✓&q=chennai`. The page features a navigation bar with links like "Weather in your city", "Guide", "API", "Dashboard", "Marketplace", "Pricing", "Maps", "Our Initiatives", "Partners", "Blog", "For Business", "sudhan", 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. The search results show "Chennai, IN" with a weather icon of a cloud with rain, indicating "light intensity drizzle". The temperature is 25°C, with a range from 25 to 25 °C, wind speed of 1.54 m/s, clouds at 75 %, and a pressure of 1012 hpa. The geo coordinates are [13.0878, 80.2785]. Below the search results, there's a message: "Search engine is very flexible. How it works:". At the bottom, there's a cookie consent banner with "Allow all" and "Manage cookies" buttons. The Windows taskbar is visible at the bottom of the browser window.

M Dhanush:

The screenshot shows the OpenWeatherMap website in a web browser. The URL is `home.openweathermap.org`. The page features a navigation bar with links like "Weather in your city", "Guide", "API", "Dashboard", "Marketplace", "Pricing", "Maps", "Our Initiatives", "Partners", "Blog", "For Business", "Naveen", and "Support". Below the navigation bar, there's a section titled "Historical weather for any location" with a background image of a sunset. The 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". It also mentions that data can be downloaded from a "Personal account" or by "contact us to order it". There are two buttons: "Learn more" and "Go to purchase". Below this, there's a section titled "Weather Dashboard" with a background image of a person using a dashboard. The text describes the "OpenWeather Dashboard" as a "lightweight and flexible visual tool" for customers. It lists features: "Track the main weather parameters: temperature, wind speed, precipitations", "Weather data are updated every hour", "Global coverage - Choose any location on the globe", and "Email notifications". The Windows taskbar is visible at the bottom of the browser window.

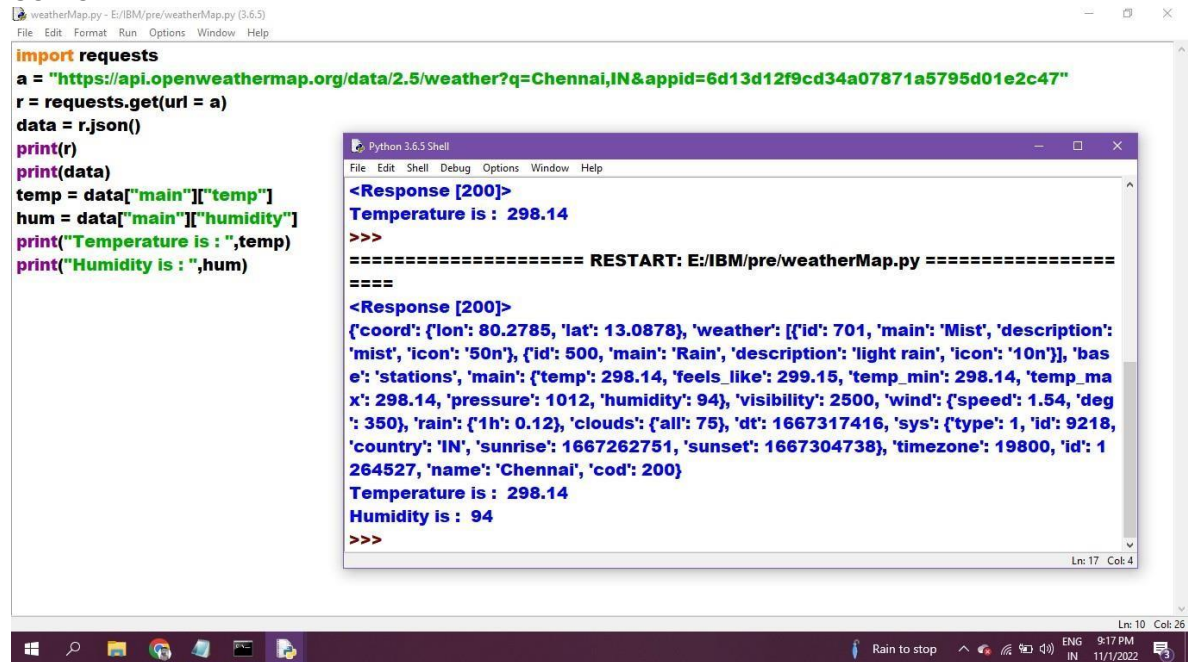
M Prakash Raj:

The screenshot shows the OpenWeather website in a browser window. The address bar displays 'home.openweathermap.org'. The navigation bar includes links for 'Weather in your city', 'Guide', 'API', 'Dashboard', 'Marketplace', 'Pricing', 'Maps', 'Our Initiatives', 'Partners', 'Blog', 'For Business', 'Tamil', and 'Support'. A green notification box at the top states: 'We have sent the confirmation link to **tamilinian07@gmail.com**. Please check your email.' Below this, a horizontal menu 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 heading 'Historical weather for any location' is displayed. Below the heading, a paragraph reads: 'Our new technology, Time Machine, has allowed us to enhance the data in the **Historical Weather Collection**.' This is followed by two bullet points: '• Historical weather data available for **ANY** coordinate' and '• The depth of historical data have been extended to **40 YEARS**'. A line of text states: 'You can download data from **Personal account** or **contact us** to order it.' At the bottom of the promotional section are two orange buttons: 'Learn more' and 'Go to purchase'. The Windows taskbar at the bottom shows the search bar and various application icons, with the system clock indicating 21:33 on 03-11-2022.

P Bhuvaneshwaran:

This screenshot shows the OpenWeather website with a confirmation message for 'mohamedumar00786@gmail.com'. The layout is identical to the first screenshot, including the navigation bar, notification box, horizontal menu, and the 'Historical weather for any location' promotional banner. The promotional banner details the 'Time Machine' technology, highlighting that historical weather data is available for any coordinate and has been extended to 40 years. It also provides instructions on how to download data from a personal account or by contacting the service. The 'Learn more' and 'Go to purchase' buttons are present at the bottom of the banner. Below the banner, a section titled 'Weather Dashboard' is partially visible, with the text: 'The OpenWeather Dashboard is a lightweight and flexible visual tool for our customers who would'. The Windows taskbar at the bottom shows the search bar and application icons, with the system clock indicating 21:39 on 03-11-2022.

OUTPUT:



The image shows a Python script in a text editor and its execution output in a terminal window. The script uses the 'requests' library to fetch weather data from the OpenWeatherMap API for Chennai, India. The output shows the raw JSON response and the extracted temperature and humidity values.

```
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: 10 Col: 26

Windows taskbar: Rain to stop, 9:17 PM, 11/1/2022