

Develop a Python script

Date	12 November 2022
Team ID	PNT2022TMID24697
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

Sami Venkata Sai Rajeev:

The screenshot shows a web browser window with the OpenWeatherMap website. The browser's address bar shows 'home.openweathermap.org'. A green notification banner 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'. 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'. A line of text states: 'You can download data from Personal account or contact us to order it.' At the bottom of the main content area, there are two orange buttons: 'Learn more' and 'Go to purchase'. The browser's taskbar at the bottom shows various application icons and the system clock indicating 21:23 on 03-11-2022.

The screenshot shows the OpenWeatherMap website in a web browser. The URL is `openweathermap.org/find?utf8=✓&q=chennai`. The page features a search bar with the text "chennai" and a "Search" button. Below the search bar, the results for "Chennai, IN" are displayed, showing "light intensity drizzle", a temperature of "25°C", and other weather details. A cookie consent banner is visible at the bottom of the page.

Weather in your city

chennai Search

Chennai, IN light intensity drizzle

25°C temperature from 25 to 25 °C, wind 1.54 m/s, clouds 75 %, 1012 hpa

Geo coords [13.0878, 80.2785]

Search engine is very flexible. How it works:

We use cookies which are essential for the site to work. We also use non-essential cookies to help us improve our services. Any data collected is anonymised. You can allow all cookies or manage them individually.

Allow all Manage cookies

Sarvepalli Navya:

The screenshot shows the OpenWeatherMap website with the "Members" tab selected. The URL is `home.openweathermap.org`. The page features a navigation bar with links to various sections. The main content area is divided into two sections: "Historical weather for any location" and "Weather Dashboard".

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

The **OpenWeather Dashboard** is a lightweight and flexible visual tool for our customers who would like to be notified weather events to make informed decisions and plan actions based on the weather input.

- Track the main weather parameters: temperature, wind speed, precipitations
- Weather data are updated every hour
- Global coverage - Choose any location on the globe
- Email notifications

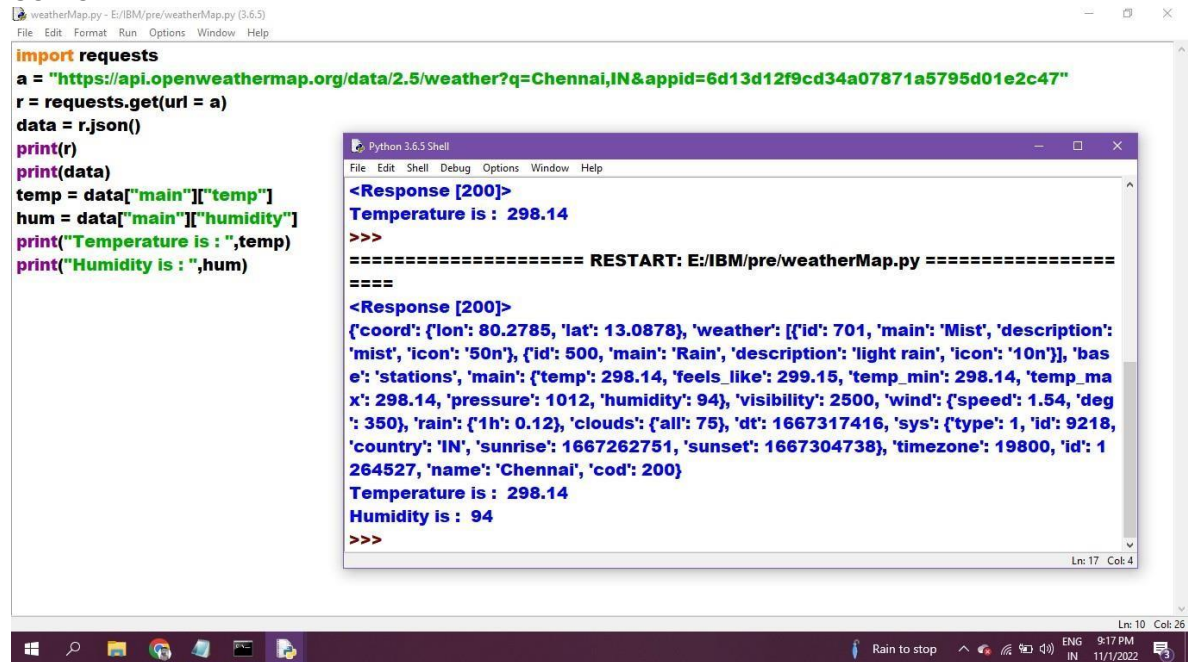
Purini Yasaswini:

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 is a horizontal menu with '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 in orange. 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, task view, and several application icons, including Edge, File Explorer, and various productivity tools. The system clock indicates 21:33 on 03-11-2022.

Danisetty Sushwanth:

This screenshot shows the OpenWeather website with a confirmation message for 'mohamedumar00786@gmail.com'. The layout is identical to the previous screenshot, featuring the same navigation bar, notification box, horizontal menu, and promotional banner for 'Historical weather for any location'. The promotional text and buttons ('Learn more', 'Go to purchase') are consistent. At the bottom of the page, a new section titled 'Weather Dashboard' is 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, task view, and application icons, with the system clock indicating 21:39 on 03-11-2022.

OUTPUT:



The image shows a screenshot of a Windows desktop environment. In the foreground, a Python 3.6.5 Shell window is open, displaying the output of a script. The script, located at E:/IBM/pre/weatherMap.py, uses the requests library to fetch weather data for Chennai, India. The output shows a successful GET request to the OpenWeatherMap API, returning a 200 status code. The response is a JSON object containing weather details for Chennai, including temperature (298.14 K), humidity (94%), and other meteorological data. The script also prints the 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: 17 Col: 4

Ln: 10 Col: 26

Windows taskbar at the bottom shows the Start button, search icon, task view icon, and several application icons. The system tray on the right indicates "Rain to stop", network status, and the date/time: 9:17 PM, 11/1/2022.