

Develop a Python script

Team ID	PNT2022TMID05196
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

Jerin A:

The screenshot shows the OpenWeatherMap website interface. At the top, there's a navigation bar with links like 'Members', 'Weather in your city', 'Guide', 'API', 'Dashboard', 'Marketplace', 'Pricing', 'Maps', 'Our Initiatives', 'Partners', 'Blog', 'For Business', 'Jerin', and 'Support'. A green notification box in the 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 content area features a large image of a sunset/sunrise over 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](#).' A bulleted list follows: '• Historical weather data available for **ANY** coordinate' and '• The depth of historical data have been extended to **40 YEARS**'. At the bottom, it says: 'You can download data from [Personal account](#) or [contact us](#) to order it.' Two buttons are present: 'Learn more' and 'Go to purchase'. The browser's address bar shows 'https://home.openweathermap.org/marketplace/my_orders'. The Windows taskbar at the bottom shows the time as 12:11 on 08-11-2022, with a temperature of 30°C and 'Cloudy' weather.

Find - OpenWeatherMap x +

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

Harish B S:

Members x +

home.openweathermap.org


Easy to use Online...

OpenWeather

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

We have sent the confirmation link to harishsaran2102@psnacet.edu.in. Please check your email.

[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.

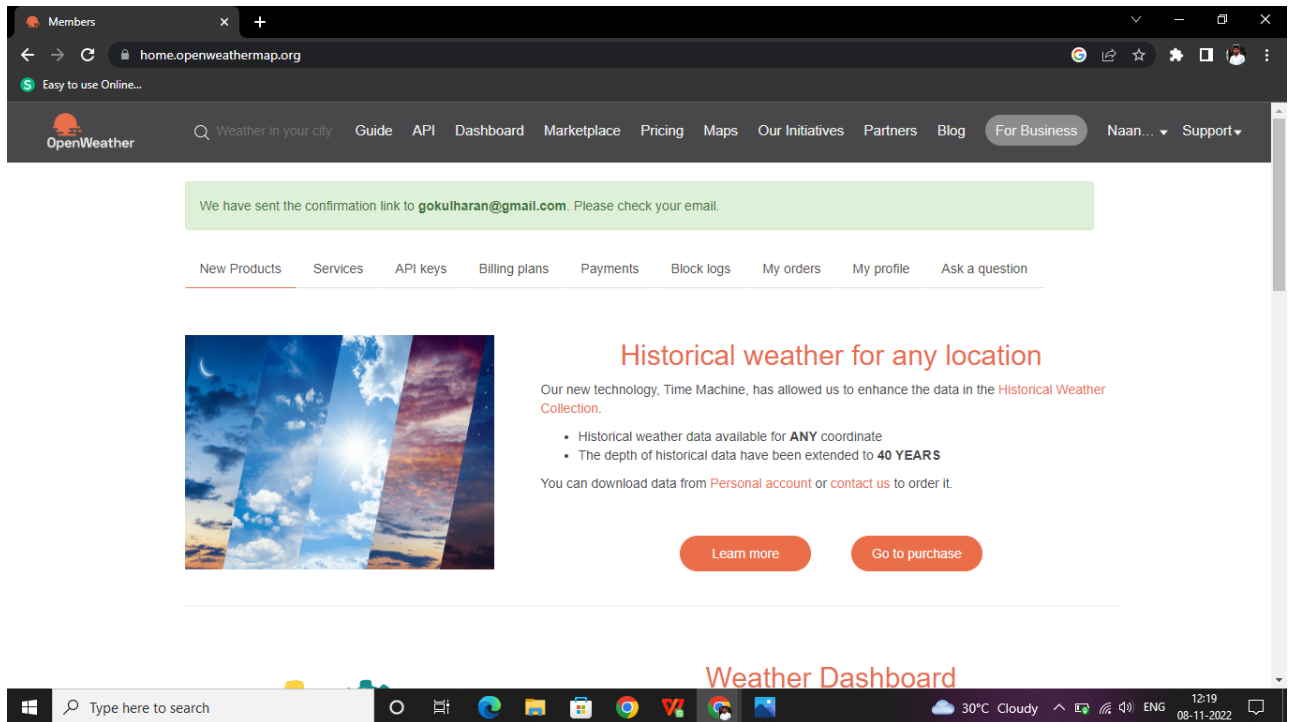
[Learn more](#) [Go to purchase](#)

Weather Dashboard

Type here to search

30°C Cloudy 12:16 08-11-2022

Gokul Haran N:



The screenshot shows the OpenWeatherMap website in a web browser. 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', 'Naan...', and 'Support'. A green confirmation message states: 'We have sent the confirmation link to **gokulharan@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 in red. Below the heading, a paragraph states: 'Our new technology, Time Machine, has allowed us to enhance the data in the **Historical Weather Collection**.' This is followed by a bulleted list: '• Historical weather data available for **ANY** coordinate' and '• The depth of historical data have been extended to **40 YEARS**'. Below the list, a line of text says: 'You can download data from **Personal account** or **contact us** to order it.' At the bottom of the content area, there are two orange buttons: 'Learn more' and 'Go to purchase'. The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system tray on the right indicates '30°C Cloudy', 'ENG', and the date '08-11-2022'.

Members x +


home.openweathermap.org

Easy to use Online...

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

We have sent the confirmation link to **gokulharan@gmail.com**. Please check your email.

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



Historical weather for any location

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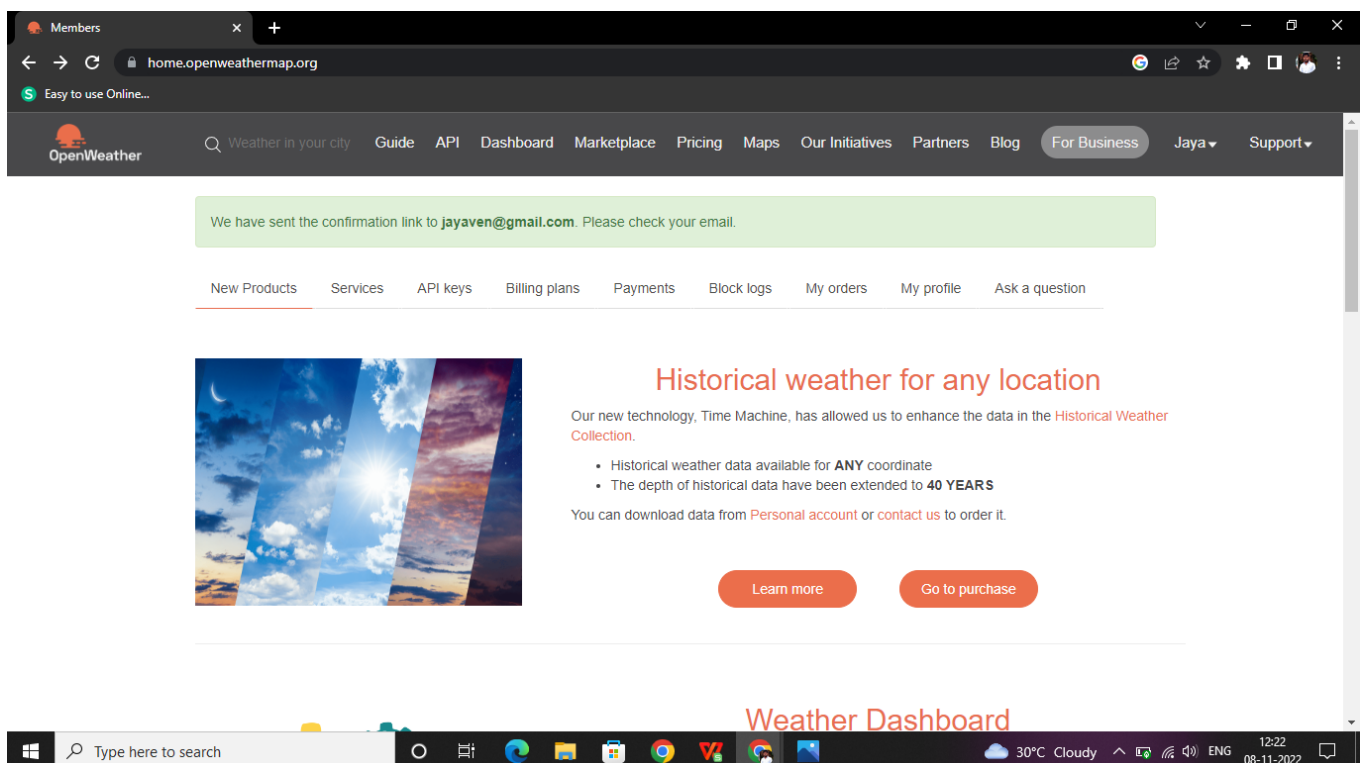
- Historical weather data available for **ANY** coordinate
- The depth of historical data have been extended to **40 YEARS**

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

Learn more Go to purchase

Type here to search 30°C Cloudy ENG 12:19 08-11-2022

Jaya Venkatesh P R



The screenshot shows the OpenWeatherMap website in a web browser. 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', 'Jaya', and 'Support'. A green confirmation message states: 'We have sent the confirmation link to **jayaven@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 in red. Below the heading, a paragraph states: 'Our new technology, Time Machine, has allowed us to enhance the data in the **Historical Weather Collection**.' This is followed by a bulleted list: '• Historical weather data available for **ANY** coordinate' and '• The depth of historical data have been extended to **40 YEARS**'. Below the list, a line of text says: 'You can download data from **Personal account** or **contact us** to order it.' At the bottom of the content area, there are two orange buttons: 'Learn more' and 'Go to purchase'. The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system tray on the right indicates '30°C Cloudy', 'ENG', and the date '08-11-2022'.

Members x +


home.openweathermap.org

Easy to use Online...

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

We have sent the confirmation link to **jayaven@gmail.com**. Please check your email.

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



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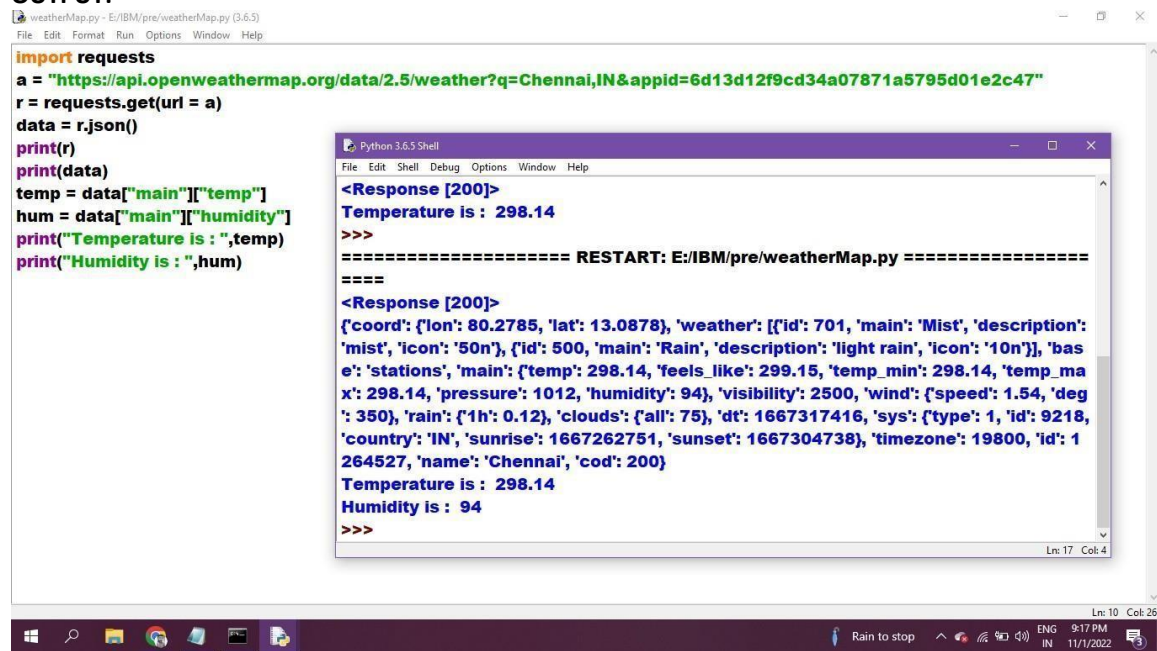
- Historical weather data available for **ANY** coordinate
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You can download data from **Personal account** or **contact us** to order it.

Learn more Go to purchase

Type here to search 30°C Cloudy ENG 12:22 08-11-2022

OUTPUT:



The image shows a screenshot of a Windows desktop environment. In the foreground, a file explorer window titled 'weatherMap.py - E:/IBM/pre/weatherMap.py (3.6.3)' is open. It displays a Python script that uses the 'requests' library to fetch weather data from the OpenWeatherMap API for Chennai, India. The script prints the raw JSON response and then extracts and prints the temperature and humidity values.

```
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)
```

In the background, a 'Python 3.6.3 Shell' window is open, showing the output of the script. It displays the raw JSON response, followed by a restart of the script, and then the extracted temperature and humidity values.

```
<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).