

DEVELOP THE PYTHON SCRIPT

Develop a Python Script

Team ID : PNT2022TMID17040

Project Name - SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

Create a code snippet using python to

- Extract weather data from OpenWeatherMap using APIs
- Send the extracted data to the cloud
- Receive data from the cloud and view it in the python compiler

The screenshot displays the OpenWeatherMap API keys management interface. At the top, there's a navigation bar with links like 'Products', 'Pricing', 'Industries', 'Blog', 'Legal', and 'Contact us'. Below this, a sub-navigation bar includes 'Billing plans', 'API keys', 'Payments', 'My profile', and 'Ask a question'. A message states: 'You can generate as many API keys as needed for your subscription. We accumulate the total load from all of them.'

| Key | Name | Status | Actions |
|----------------------------------|---------|--------|--|
| f67f74461bc019cbd0bef659486a5aed | kamaraj | Active | Toggle Edit Delete |
| ee6d5b5fa83637abce54cb288c704139 | chennai | Active | Toggle Edit Delete |

On the right, there's a 'Create key' section with a form labeled 'API key name' and a 'Generate' button.

At the bottom, there are three columns of links: 'Product Collections' (Current and Forecast APIs, Historical Weather Data, Weather Maps, Weather Dashboard), 'Terms & Conditions' (Terms and conditions of sale, Privacy Policy, Website terms and conditions), and 'About us' (OpenWeather is a team of IT experts and data scientists that has been practising deep weather data science since 2014. For each point on the globe, OpenWeather provides historical, current and forecasted weather data via light-speed APIs. Headquarters in London, UK).

The Windows taskbar at the bottom shows the search bar, task view, and various application icons. The system tray on the right indicates the weather is 28°C Cloudy, the time is 10:15, and the date is 02-11-2022.

Weather in your city

hyderabad

Search



Hyderabad, IN *mist*

23.2°C temperature from 23.2 to 24.7 °C, wind 2.57 m/s, clouds 75 %, 1018 hpa

Geo coords [17.3753, 78.4744]



Hyderabad, PK *clear sky*

29.1°C temperature from 29.1 to 29.1 °C, wind 4.51 m/s, clouds 2 %, 1015 hpa

Geo coords [25.3924, 68.3737]



Hyderābād, IN *mist*

24.1°C temperature from 22.6 to 24.1 °C, wind 2.57 m/s, clouds 75 %, 1018 hpa

Geo coords [17.25, 78.5]

```
{
  "coord": {
    "lon": 78.4744,
    "lat": 17.3753
  },
  "weather": [
    {
      "id": 701,
      "main": "Mist",
      "description": "mist",
      "icon": "50d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 301.38,
    "feels_like": 303.58,
    "temp_min": 301.38,
    "temp_max": 301.88,
    "pressure": 1017,
    "humidity": 65,
    "visibility": 5000,
    "wind": {
      "speed": 4.12,
      "deg": 80
    },
    "clouds": {
      "all": 75
    },
    "dt": 1666333196,
    "sys": {
      "type": 1,
      "id": 9214,
      "country": "IN",
      "sunrise": 1666312830,
      "sunset": 1666354845,
      "timezone": 19800,
      "id": 1269843,
      "name": "Hyderabad",
      "cod": 200
    }
  }
}
```

```
Gmail YouTube Maps W New Raspberry Pi Po... Colorful Clean 5 Poi... IBM W
owm.py - D:/Python/Python310/owm.py (3.10.8)
File Edit Format Run Options Window Help
import requests
api_data="https://api.openweathermap.org/data/2.5/weather?q=Hyderabad,IN&appid=121da254d7b328809bf6c422fd6f3623"
rec=requests.get(url=api_data)
data=rec.json()
print(data)

IDLE Shell 3.10.8
File Edit Shell Debug Options Window Help
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/Python/Python310/owm.py =====
{'coord': {'lon': 78.4744, 'lat': 17.3753}, 'weather': [{'id': 721, 'main': 'Haze', 'description': 'haze', 'icon': '50d'}], 'base': 'stations', 'main': {'temp': 301.38, 'feels_like': 303.07, 'temp_min': 301.38, 'temp_max': 301.88, 'pressure': 1017, 'humidity': 61}, 'visibility': 5000, 'wind': {'speed': 3.6, 'deg': 90}, 'clouds': {'all': 40}, 'dt': 1666335428, 'sys': {'type': 1, 'id': 9214, 'country': 'IN', 'sunrise': 1666312830, 'sunset': 1666354845, 'timezone': 19800, 'id': 1269843, 'name': 'Hyderabad', 'cod': 200}}
>>>
```

```
{
  "coord": {
    "lon": 78.4744,
    "lat": 17.3753
  },
  "weather": [
    {
      "id": 701,
      "main": "Mist",
      "description": "mist",
      "icon": "50d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 301.38,
    "feels_like": 303.58,
    "temp_min": 301.38,
    "temp_max": 301.88,
    "pressure": 1017,
    "humidity": 65,
    "visibility": 5000,
    "wind": {
      "speed": 4.12,
      "deg": 80
    },
    "clouds": {
      "all": 75
    },
    "dt": 1666333196,
    "sys": {
      "type": 1,
      "id": 9214,
      "country": "IN",
      "sunrise": 1666312830,
      "sunset": 1666354845,
      "timezone": 19800,
      "id": 1269843,
      "name": "Hyderabad",
      "cod": 200
    }
  }
}
```

```
Command Prompt - python
C:\Users\USER>python
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import requests
>>> api_data="https://api.openweathermap.org/data/2.5/weather?q=Hyderabad,IN&appid=121da254d7b328809bf6c422fd6f3623"
>>> rec=requests.get(url=api_data)
>>> data=rec.json()
>>> print(data)
{'coord': {'lon': 78.4744, 'lat': 17.3753}, 'weather': [{'id': 721, 'main': 'Haze', 'description': 'haze', 'icon': '50d'}], 'base': 'stations', 'main': {'temp': 301.38, 'feels_like': 303.07, 'temp_min': 301.38, 'temp_max': 301.88, 'pressure': 1017, 'humidity': 61}, 'visibility': 5000, 'wind': {'speed': 3.6, 'deg': 90}, 'clouds': {'all': 40}, 'dt': 1666335428, 'sys': {'type': 1, 'id': 9214, 'country': 'IN', 'sunrise': 1666312830, 'sunset': 1666354845, 'timezone': 19800, 'id': 1269843, 'name': 'Hyderabad', 'cod': 200}}
>>>
```