

DEVELOP THE PYTHON SCRIPT

Develop a Python Script

Team ID : PNT2022TMID12069

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, the browser address bar shows the URL 'home.openweathermap.org/api_keys'. The page header includes the OpenWeather logo and navigation links like 'Products', 'Pricing', 'Industries', 'Blog', 'Legal', and 'Contact us'. Below the header, there are tabs for '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.'

The main content area features a table of existing API keys and a 'Create key' button. The table has columns for 'Key', 'Name', 'Status', and 'Actions'. Two keys are listed:

Key	Name	Status	Actions
f67f74461bc019cbd0bef659486a5aed	kamaraj	Active	
ee6d5b5fa83637abce54cb288c704139	chennai	Active	

To the right of the table is a 'Create key' section with an input field for 'API key name' and a 'Generate' button.


The footer of the page contains three sections: 'Product Collections' (listing Current and Forecast APIs, Historical Weather Data, Weather Maps, and Weather Dashboard), 'Terms & Conditions' (listing Terms and conditions of sale, Privacy Policy, and Website terms and conditions), and 'About us' (describing OpenWeather as a team of IT experts and data scientists since 2014).


The Windows taskbar at the bottom shows the search bar, taskbar icons, system tray with weather (28°C Cloudy), and the date/time (10:15, 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
    }
  }
}
```

```
{
  "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": 3.6,
    "deg": 90
  },
  "clouds": {
    "all": 40
  },
  "dt": 1666333196,
  "sys": {
    "type": 1,
    "id": 9214,
    "country": "IN",
    "sunrise": 1666312830,
    "sunset": 1666354845,
    "timezone": 19800,
    "id": 1269843,
    "name": "Hyderabad",
    "cod": 200
  }
}
```

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}}
>>>
```