

# DEVELOP THE PYTHON SCRIPT

## Develop a Python Script

Date : 21 October 2022







Team ID : PNT2022TMID48096

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 shows the OpenWeatherMap website's API keys management interface. At the top, there's a navigation bar with the OpenWeather logo and various links like 'Guide', 'API', 'Dashboard', etc. A message at the top states: 'You have to verify your email to use OpenWeatherMap services. Please [click here](#) to get an email with the confirmation link.' Below this, there's a section for API keys with a table listing existing keys. The first key is '121da254d7b328809bf6c422fd6f3623' with name 'Default' and status 'Active'. The second key is '83b76984e68a9673cadf6ae071a53b0c' with name 'chennai' and status 'Active'. To the right of the table is a 'Create key' form with an input field for 'API key name' and a 'Generate' button. At the bottom, there are tabs for 'Product Collections', 'Subscription', and 'Company'. The Windows taskbar at the very bottom shows the date as 10/20/2022 and time as 11:59 PM.

Key	Name	Status	Actions
121da254d7b328809bf6c422fd6f3623	Default	Active	  
83b76984e68a9673cadf6ae071a53b0c	chennai	Active	  

## Weather in your city

hyderabad

Search



Hyderabad, IN haze

28.2°C temperature from 28.2 to 28.7 °C, wind 4.12 m/s, clouds 75 %, 1017 hpa

Geo coords [17.3753, 78.4744]



Hyderabad, PK clear sky

32.6°C temperature from 32.6 to 32.6 °C, wind 1.69 m/s, clouds 0 %, 1016 hpa

Geo coords [25.3924, 68.3737]



Hyderabad, IN mist

28.1°C temperature from 27.6 to 28.1 °C, wind 4.12 m/s, clouds 40 %, 1017 hpa

```
{
  "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
    }
  }
}
```

class | x IBM x IBM-EI x IoT-B6 x IoT-B6 x IoT-B6 x sketch x Find - x https:// x GitHub x IBM W x +

api.openweathermap.org/data/2.5/weather?q=Hyderabad,IN&appid=121da254d7b328809bf6c422fd6f3623

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```
{
  "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": 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
  }
}
```

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}}
>>>
```

Type here to search

28°C Cloudy 12:00 AM 10/21/2022

class | x IBM x IBM-EI x IoT-B6 x IoT-B6 x IoT-B6 x sketch x Find - x https:// x GitHub x IBM W x +

api.openweathermap.org/data/2.5/weather?q=Hyderabad,IN&appid=121da254d7b328809bf6c422fd6f3623

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```
{
  "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}}
>>>
```

Type here to search

28°C Cloudy 12:03 AM 10/21/2022