

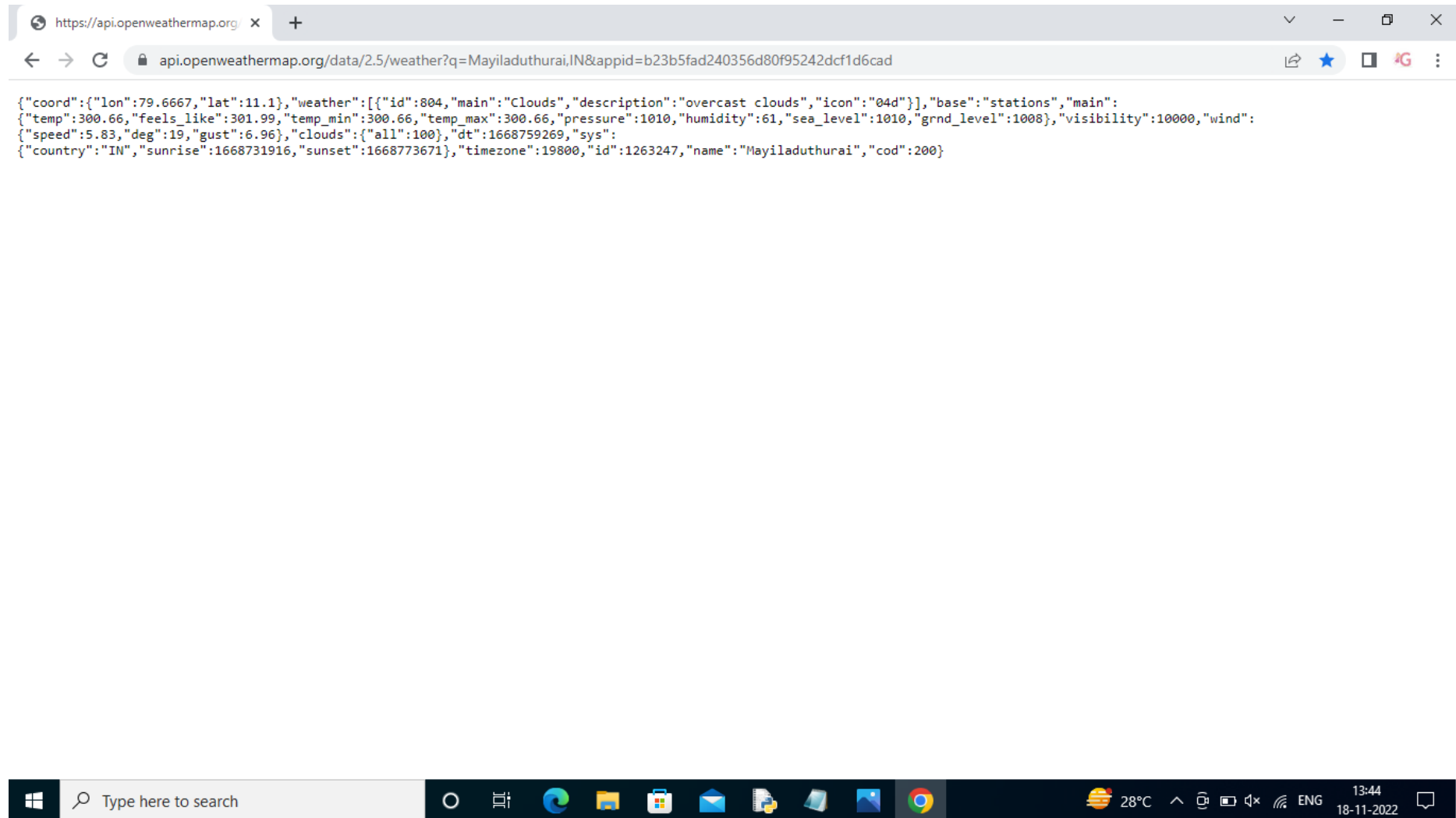
PROJECT DEVELOPMENT – DELIVERY OF SPRINT – 2

| | |
|----------------------|--|
| Date | 31 October 2022 |
| Team ID | PNT2022TMID46406 |
| Project Title | Signs With Smart Connectivity for Better RoadSafety |

SPRINT-2 (USN - 3)

Develop a python script to retrieve data from API. Push the code from Sprint 1 to cloud so it can be accessed from anywhere.

STEP 1: Getting the URL from Open Weather API



The screenshot shows a web browser window with the URL `https://api.openweathermap.org/data/2.5/weather?q=Mayiladuthurai,IN&appid=b23b5fad240356d80f95242dcf1d6cad`. The browser displays the JSON response from the API, which includes weather data for Mayiladuthurai, India. The JSON response is as follows:

```
{
  "coord": {
    "lon": 79.6667,
    "lat": 11.1
  },
  "weather": [
    {
      "id": 804,
      "main": "Clouds",
      "description": "overcast clouds",
      "icon": "04d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 300.66,
    "feels_like": 301.99,
    "temp_min": 300.66,
    "temp_max": 300.66,
    "pressure": 1010,
    "humidity": 61,
    "sea_level": 1010,
    "grnd_level": 1008,
    "visibility": 10000,
    "wind": {
      "speed": 5.83,
      "deg": 19,
      "gust": 6.96
    },
    "clouds": {
      "all": 100
    },
    "dt": 1668759269,
    "sys": {
      "country": "IN",
      "sunrise": 1668731916,
      "sunset": 1668773671,
      "timezone": 19800,
      "id": 1263247,
      "name": "Mayiladuthurai",
      "cod": 200
    }
  }
}
```

The Windows taskbar at the bottom shows the search bar with the text "Type here to search", several application icons (including Edge, File Explorer, Mail, and Chrome), and system tray information indicating a temperature of 28°C, the date 18-11-2022, and the time 13:44.

STEP 2: Developing a Python Script which connects with the URL created using Open Weather API.

```
Sprint2.py - C:\Users\ADMIN\Downloads\Sprint2.py (3.7.0)
File Edit Format Run Options Window Help

import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
import requests
from pprint import pprint

#Provide your IBM Watson Device Credentials
organization = "uaortj"
deviceType = "weatherapptype"
deviceId = "weatherappid"
authMethod = "token"
authToken = "appl2345678"

city = input('Enter your city : ')
url = 'http://api.openweathermap.org/data/2.5/weather?q={}&appid=b23b5fad240356d80f95242dcfld6cad'.format(city)


res = requests.get(url)

data = res.json()

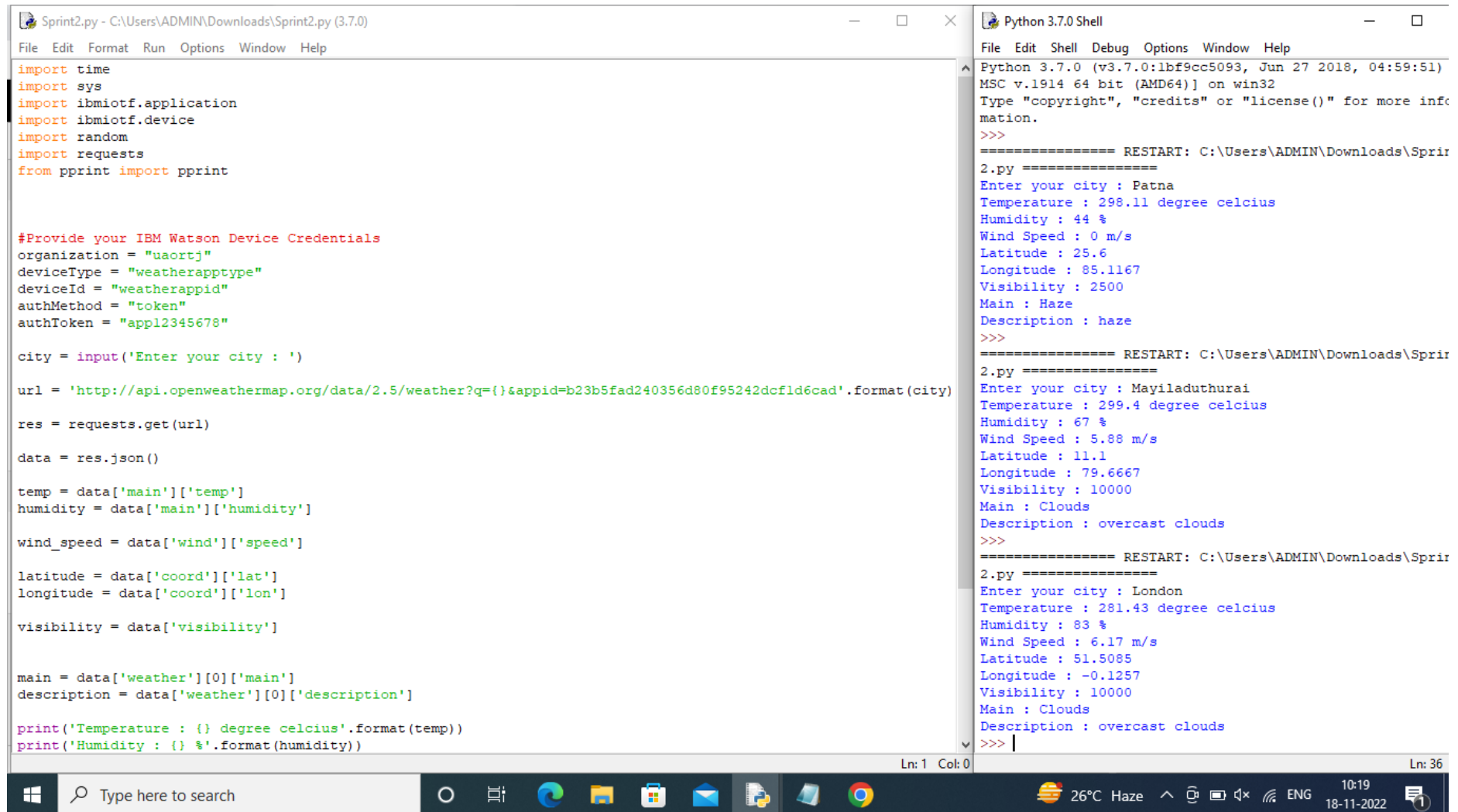
temp = data['main']['temp']
humidity = data['main']['humidity']
wind_speed = data['wind']['speed']
latitude = data['coord']['lat']
longitude = data['coord']['lon']
visibility = data['visibility']
main = data['weather'][0]['main']
description = data['weather'][0]['description']

print('Temperature : {} degree celcius'.format(temp))
print('Humidity : {} %'.format(humidity))
print('Wind Speed : {} m/s'.format(wind_speed))
print('Latitude : {}'.format(latitude))
print('Longitude : {}'.format(longitude))
print('Visibility : {}'.format(visibility))
print('Main : {}'.format(main))
print('Description : {}'.format(description))

Ln: 18 Col: 97
```



STEP 3: Getting the corresponding weather details for the city we have chosen as input.



The image shows a screenshot of a Windows desktop with two windows open. The left window is a text editor titled 'Sprint2.py - C:\Users\ADMIN\Downloads\Sprint2.py (3.7.0)'. It contains a Python script that uses the IBM Watson IoT API to fetch weather data for a city. The script imports necessary modules, sets up IBM credentials, prompts the user for a city, constructs an API URL, and prints the resulting weather details. The right window is a 'Python 3.7.0 Shell' showing the execution of the script. It displays the output for three different cities: Patna, Mayiladuthurai, and London, showing temperature, humidity, wind speed, latitude, longitude, visibility, and a main weather description.

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
import requests
from pprint import pprint

#Provide your IBM Watson Device Credentials
organization = "uaortj"
deviceType = "weatherapptype"
deviceId = "weatherappid"
authMethod = "token"
authToken = "appl2345678"

city = input('Enter your city : ')

url = 'http://api.openweathermap.org/data/2.5/weather?q={}&appid=b23b5fad240356d80f95242dcfld6cad'.format(city)

res = requests.get(url)

data = res.json()

temp = data['main']['temp']
humidity = data['main']['humidity']

wind_speed = data['wind']['speed']

latitude = data['coord']['lat']
longitude = data['coord']['lon']

visibility = data['visibility']

main = data['weather'][0]['main']
description = data['weather'][0]['description']

print('Temperature : {} degree celcius'.format(temp))
print('Humidity : {} %'.format(humidity))
```

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51)
MSC v.1914 64 bit (AMD64) on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\ADMIN\Downloads\Spir
2.py =====
Enter your city : Patna
Temperature : 298.11 degree celcius
Humidity : 44 %
Wind Speed : 0 m/s
Latitude : 25.6
Longitude : 85.1167
Visibility : 2500
Main : Haze
Description : haze
>>>
===== RESTART: C:\Users\ADMIN\Downloads\Spir
2.py =====
Enter your city : Mayiladuthurai
Temperature : 299.4 degree celcius
Humidity : 67 %
Wind Speed : 5.88 m/s
Latitude : 11.1
Longitude : 79.6667
Visibility : 10000
Main : Clouds
Description : overcast clouds
>>>
===== RESTART: C:\Users\ADMIN\Downloads\Spir
2.py =====
Enter your city : London
Temperature : 281.43 degree celcius
Humidity : 83 %
Wind Speed : 6.17 m/s
Latitude : 51.5085
Longitude : -0.1257
Visibility : 10000
Main : Clouds
Description : overcast clouds
>>>

Ln: 1 Col: 0

Ln: 36

Type here to search

26°C Haze 10:19 18-11-2022