SPRINT 4

Date	17 NOV 2022
Project Name	Signs with smart connectivity for better Road Safety
Team ID	PNT2022TMID11039

Python Code:

```
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json
myConfig = {
#Configuration
"identity": {
"orgId": "gi5mpx",
"typeId": "NodeMCU",
"deviceId":"12345678"
},
#API Key
"auth": {
"token": "1234567890"
}
}
#Receiving callbacks from IBM IOT platform
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
    client.connect()
```

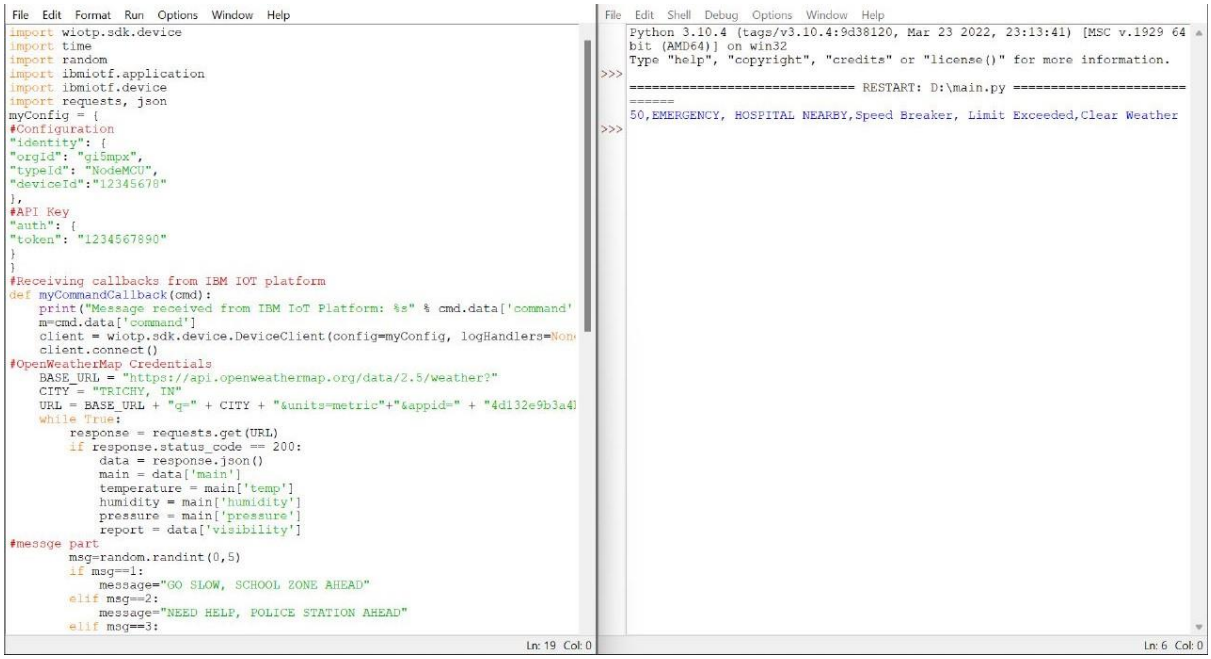
```
#OpenWeatherMap Credentials
    BASE_URL = "https://api.openweathermap.org/data/2.5/weather?"
    CITY = "TRICHY, IN"
    URL = BASE_URL + "q=" + CITY + "&units=metric"+"&appid=" +
"4d132e9b3a4b0c4fc7027fda6d91c486"
    while True:
        response = requests.get(URL)
        if response.status_code == 200:
            data = response.json()
            main = data['main']
            temperature = main['temp']
            humidity = main['humidity']
            pressure = main['pressure']
            report = data['visibility']
#messge part
        msg=random.randint(0,5)
        if msg==1:
            message="GO SLOW, SCHOOL ZONE AHEAD"
        elif msg==2:
            message="NEED HELP, POLICE STATION AHEAD"
        elif msg==3:
            message="EMERGENCY, HOSPITAL NEARBY"
        elif msg==4:
            message="DINE IN, RESTAURENT AVAILABLE"
        elif msg==5:
            message="PETROL BUNK NEARBY"
        else:
            message=""
#Speed Limit part
        speed=random.randint(0,150)
        if speed>=100:
```

```
            speedMsg=" Limit Exceeded"
        elif speed>=60 and speed<100:
            speedMsg="Moderate"
        else:
            speedMsg="Slow"
#Diversion part
        sign=random.randint(0,5)
        if sign==1:
            signMsg="Right Diversion"
        elif sign==2:
            signMsg="Speed Breaker"
        elif sign==3:
            signMsg="Left Diversion"
        elif sign==4:
            signmsg="U Turn"
        else:
            signMsg=""
#Visibility
        if temperature < 24:
            visibility="Fog Ahead, Drive Slow"
        elif temperature < 20:
            visibility="Bad Weather"
        else:
            visibility="Clear Weather"
    else:
        print("Error in the HTTP request")
        myData={'Temperature':temperature, 'Message':message, 'Sign':signMsg,
'Speed':speedMsg,
        'Visibility':visibility}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
```

#PUBLISHING TO IOT WATSON

```
    print("Published data Successfully: ", myData)
    print("")
        #client.commandCallback = myCommandCallback
        #time.sleep(5)
        #client.disconnect()
```

OUTPUT:



```
File  Edit  Format  Run  Options  Window  Help
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        elif msg==3:
Ln: 19  Col: 0
```

```
File  Edit  Shell  Debug  Options  Window  Help
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64
bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: D:\main.py ==========
======
50,EMERGENCY, HOSPITAL NEARBY,Speed Breaker, Limit Exceeded,Clear Weather
>>>
Ln: 6  Col: 0
```