

## SPRINT 4

Date	18 NOV 2022
Project Name	Signs with smart connectivity for better Road Safety
Team ID	PNT2022TMID11039

### Code:

```
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json
myConfig = {
#Configuration
"identity": {
"orgId": "ju7btr",
"typeId": "12345",
"deviceId": "13555544"
},
#API Key
"auth": {
"token": "_iMxKSQagd4LjoqNLZ"
}
}
#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



The screenshot shows a terminal window with a light gray background. At the top, there is a header line: "===== RESTART: D:\main.py =====". Below this, there is a line of output: "50,EMERGENCY, HOSPITAL NEARBY,Speed Breaker, Limit Exceeded,Clear Weather". The prompt ">>>" is visible on the left side of the terminal. The bottom right corner of the terminal window displays "Ln: 6 Col: 0".

```
>>>===== RESTART: D:\main.py =====
50,EMERGENCY, HOSPITAL NEARBY,Speed Breaker, Limit Exceeded,Clear Weather
>>>
```

Ln: 6 Col: 0