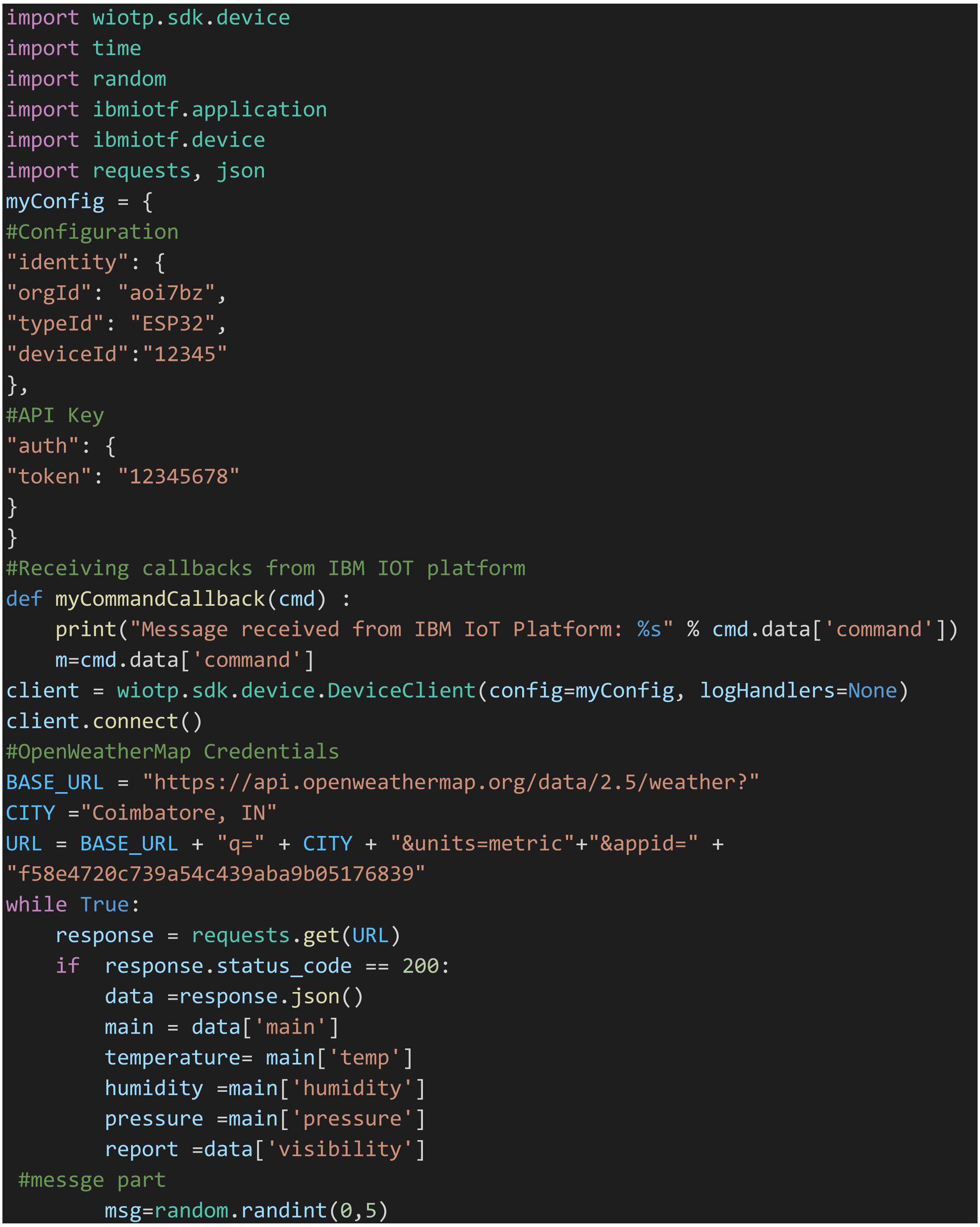
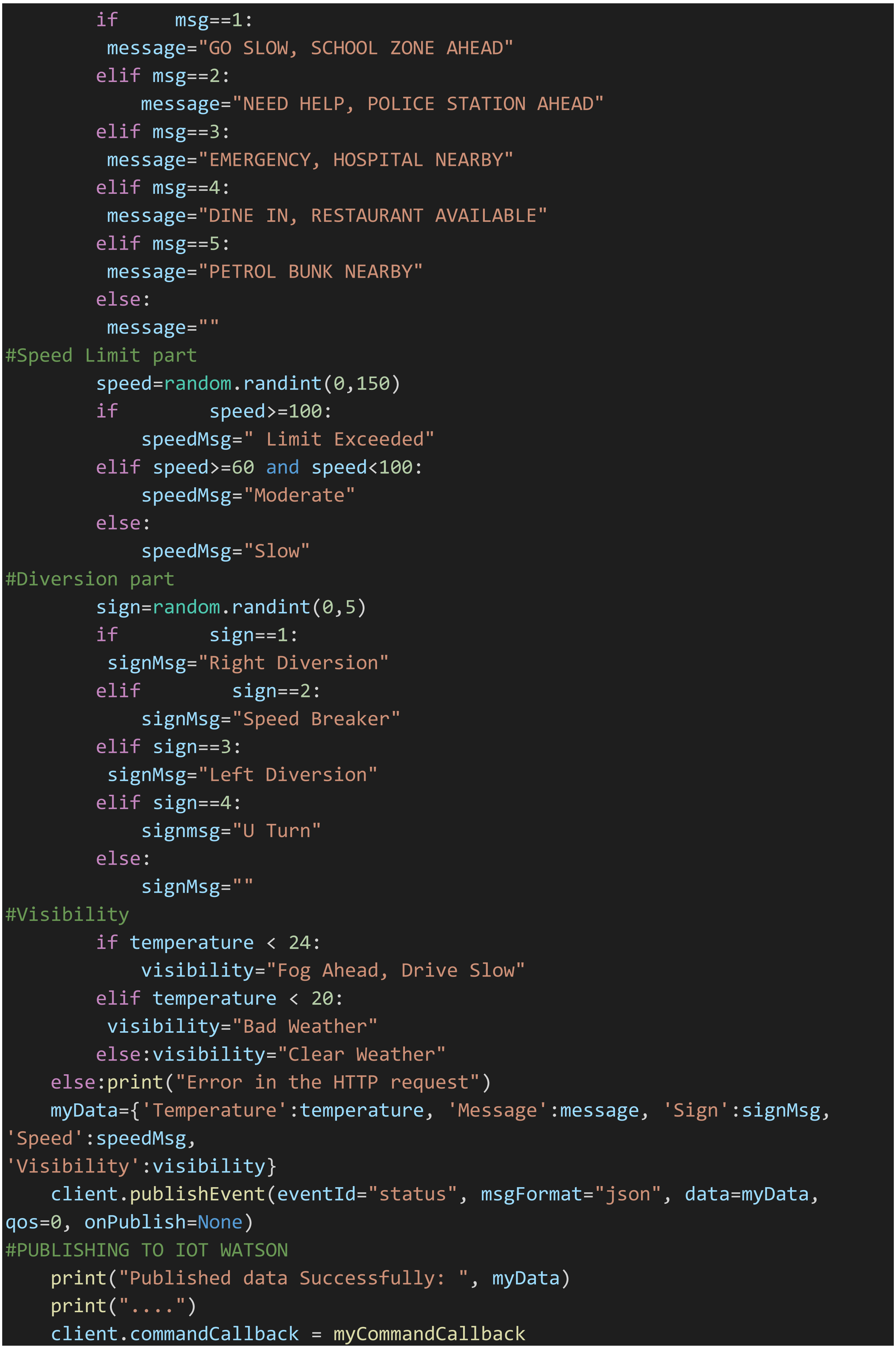
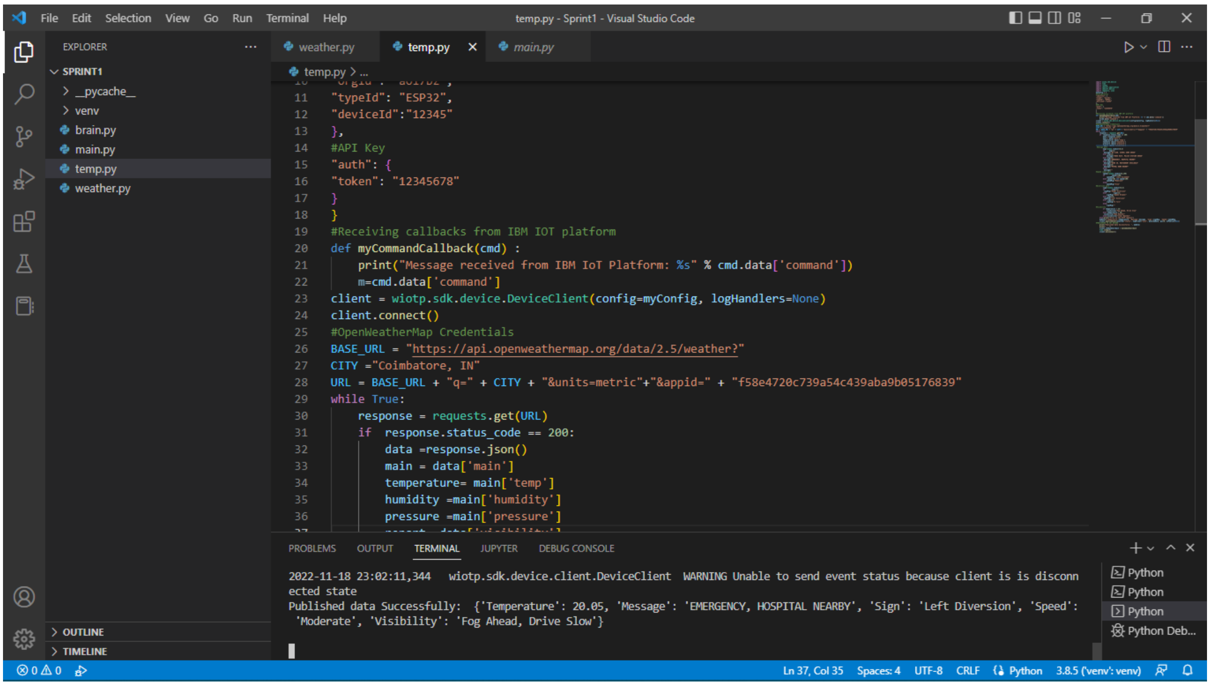
Team ID	**PNT2022TMID08724**
Project Name	**Signs with Smart Connectivity for Better Road Safety**



```python
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json
myConfig = {
#Configuration
"identity": {
"orgId": "aoi7bz",
"typeId": "ESP32",
"deviceId":"12345"
},
#API Key
"auth": {
"token": "12345678"
}
}
#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 ="Coimbatore, IN"
URL = BASE_URL + "q=" + CITY + "&units=metric"+"&appid=" +
"f58e4720c739a54c439aba9b05176839"
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, RESTAURANT 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()
```



```
"typeId": "ESP32",
"deviceId":"12345"
},
#API Key
"auth": {
"token": "12345678"
}
}
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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']
```

```
2022-11-18 23:02:11,344   wiotp.sdk.device.client.DeviceClient  WARNING Unable to send event status because client is is disconn
ected state
Published data Successfully:  {'Temperature': 20.05, 'Message': 'EMERGENCY, HOSPITAL NEARBY', 'Sign': 'Left Diversion', 'Speed':
 'Moderate', 'Visibility': 'Fog Ahead, Drive Slow'}
```

OUTPUT:

```
{
"Temperature": 20.05,
"Message": "",
"Sign": "Left Diversion",
"Speed": "Slow",
"Visibility": "Fog Ahead, Drive Slow"
}
```