CODE :

Date	17 November 2022
Team ID	PNT2022TMID38493
Project Name	Signs with Smart Connectivity for Better Road Safety

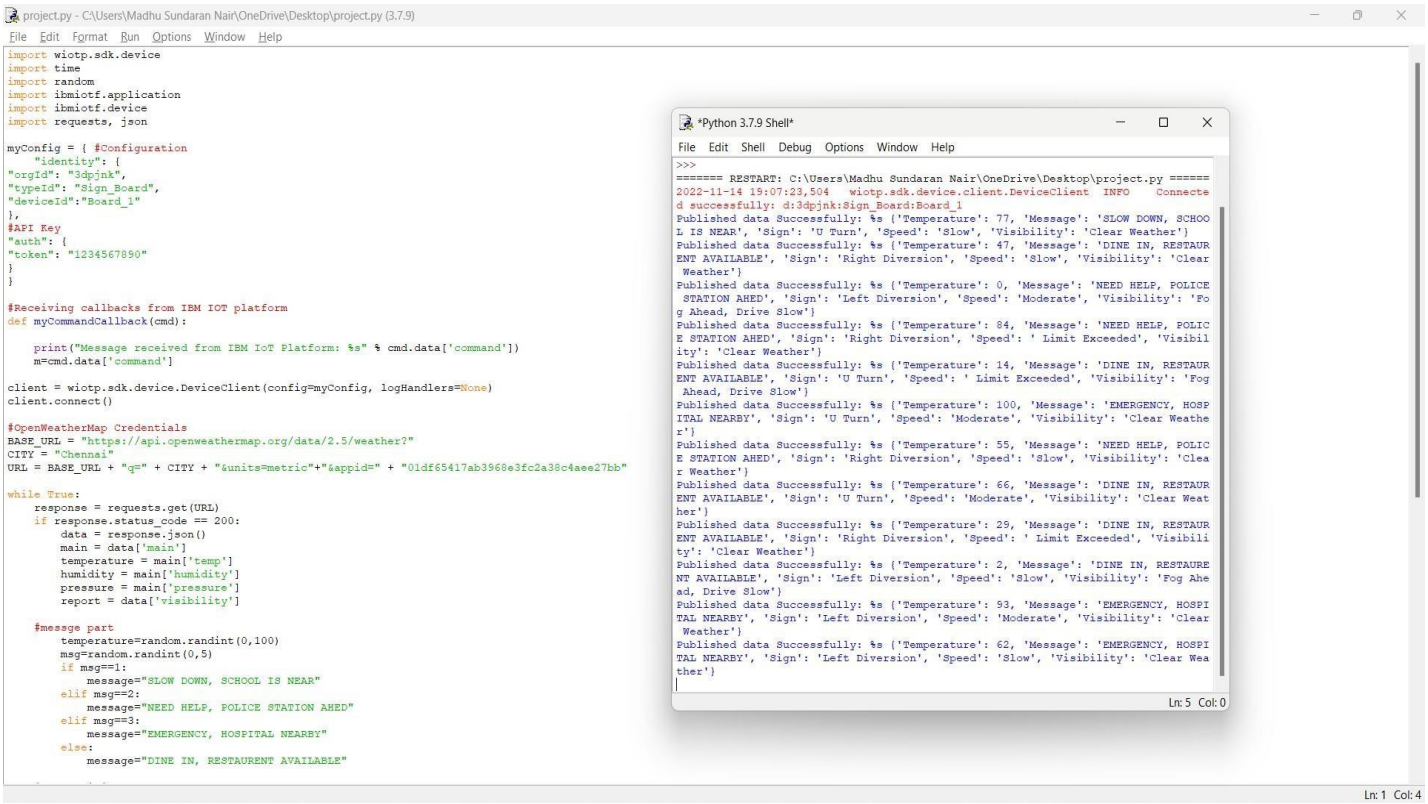
CODING & SOLUTIONING:

```
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json


myConfig = {
#Configuration
"identity": {
"orgId": "3dpjnk",
"typeId": "Sign_Board",
"deviceId":"Board_1"},
#API Key
"auth": {
"token": "1234567890"
}
}

#Receiving callbacks from IBM IOT


platformdefmyCommandCallback(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

CITY = "Nagercoil"
URL = BASE_URL + "q=" + CITY + "&units=metric"+"&appid=" +
"01df65417ab3968e3fc2a38c4aee27bb"

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="SLOW DOWN, SCHOOL IS NEAR"
elif msg==2:
message="NEED HELP, POLICE STATION AHED"
elif msg==3:
message="EMERGENCY, HOSPITAL NEARBY"
elif msg==4:
message="DINE IN, RESTAURENT AVAILABLE"
else:
message=""

#Speed

#speedLimit 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==3:
signMsg="Left Diversion"
elif sign==5:
signmsg="U Turn"
else:
    signMsg=""


 #Visibility

if temperature < 24:
   visibility="Fog Ahead, Drive Slow"
elif temperature < 20:
   visibility="Bad Weather"
elif temperature >24:
   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:%s",myData)
client.commandCallback=myCommandCallbacktime.sleep(5)
client.disconnect()
```

Output:



GitHub Link :

https://github.com/IBM-EPBL/IBM-Project-47820-1660802629

DEMO VIDEO LINK:

https://drive.google.com/file/d/1eAnhPs7oeyT6s-H1zy8j59o-0SlemIvw/view?usp=drivesdk