

FINAL DELIVERABLES

FINAL CODE

Date	19 November 2022
Team ID	PNT2022TMID29129
Project Name	Project – Signs with Smart Connectivity for Better Road Safety

PROGRAM CODE :

main.py

```
#IBM Watson IOT Platform
```

```
#pip install wiotp-sdk
```

```
import wiotp.sdk.device
```

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "2r52ij",
```

```
        "typeId": "Roadsafety",
```

```
        "deviceId": "1234"
```

```
    },
```

```
    "auth": {
```

```
        "token": "12345678"
```

```
    }
```

```
}
```

```
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()
```

```
while True:
```

```
    temp=random.randint(-20,125)
```

```
    hum=random.randint(0,100)
```

```
    myData={'temperature':temp, 'humidity':hum}
```

```
    client.publishEvent(eventId="status", msgFormat="json",  
data=myData, qos=0, onPublish=None)
```

```
    print("Published data Successfully: %s", myData)
```

```
    client.commandCallback = myCommandCallback
```

```
    time.sleep(2)
```

```
client.disconnect()
```

Weather.py

```
import requests as reqs
```

```
def get(myLocation,APIKEY):
```

```
    apiURL =
```

```
f"https://api.openweathermap.org/data/2.5/weather?q={myLocation  
&appid={APIKEY}"
```

```
    responseJSON = (reqs.get(apiURL)).json()
```

```

returnObject = {
    "temperature" : responseJSON['main']['temp'] - 273.15,
    "weather" : [responseJSON['weather'][_]['main'].lower() for _
in range(len(responseJSON['weather']))],
    "visibility" : responseJSON['visibility']/100, # visibility in
percentage where 10km is 100% and 0km is 0%
}
if("rain" in responseJSON):
    returnObject["rain"] = [responseJSON["rain"][key] for key in
responseJSON["rain"]]
    return(returnObject)
}

```