

SPRINT 4

Date	14 november 2022
Team ID	PNT2022TMID00982
Project Name	Project – Signs with Smart Connectivity for Better Road Safety

```

project.py - C:\Users\Madhu Sundaran Nair\OneDrive\Desktop\project.py (3.7.9)
File Edit Format Run Options Window Help
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 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 = "Chennai"
URL = BASE_URL + "&q=" + CITY + "&units=metric"&"&appid=" + "01d65417ab3968e3fc2a30c4ee27bb"

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']

    #Message part
    temperature=random.randint(0,100)
    msg=random.randint(0,5)
    if msg==1:
        message="SLOW DOWN, SCHOOL IS NEAR"
    elif msg==2:
        message="NEED HELP, POLICE STATION AHEAD"
    elif msg==3:
        message="EMERGENCY, HOSPITAL NEARBY"
    else:
        message="DINE IN, RESTAURANT AVAILABLE"

===== RESTART: C:\Users\Madhu Sundaran Nair\OneDrive\Desktop\project.py =====
2022-11-14 19:07:23.504 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: 3dpjnk:Sign_Board:Board_1
Published data Successfully: %s (%Temperature': 77, 'Message': 'SLOW DOWN, SCHOO
L IS NEAR', 'Sign': 'U Turn', 'Speed': 'Slow', 'Visibility': 'Clear Weather')
Published data Successfully: %s (%Temperature': 47, 'Message': 'DINE IN, RESTAUR
ANT AVAILABLE', 'Sign': 'Right Diversion', 'Speed': 'Slow', 'Visibility': 'Clear
Weather')
Published data Successfully: %s (%Temperature': 0, 'Message': 'NEED HELP, POLICE
STATION AHEAD', 'Sign': 'Left Diversion', 'Speed': 'Moderate', 'Visibility': 'Fo
g Ahead, Drive Slow')
Published data Successfully: %s (%Temperature': 84, 'Message': 'NEED HELP, POLIC
E STATION AHEAD', 'Sign': 'Right Diversion', 'Speed': 'Limit Exceeded', 'Visibil
ity': 'Clear Weather')
Published data Successfully: %s (%Temperature': 14, 'Message': 'DINE IN, RESTAUR
ANT AVAILABLE', 'Sign': 'U Turn', 'Speed': 'Limit Exceeded', 'Visibility': 'Fog
Ahead, Drive Slow')
Published data Successfully: %s (%Temperature': 100, 'Message': 'EMERGENCY, HOSP
ITAL NEARBY', 'Sign': 'U Turn', 'Speed': 'Moderate', 'Visibility': 'Clear Weathe
r')
Published data Successfully: %s (%Temperature': 55, 'Message': 'NEED HELP, POLIC
E STATION AHEAD', 'Sign': 'Right Diversion', 'Speed': 'Slow', 'Visibility': 'Clea
r Weather')
Published data Successfully: %s (%Temperature': 66, 'Message': 'DINE IN, RESTAUR
ANT AVAILABLE', 'Sign': 'U Turn', 'Speed': 'Moderate', 'Visibility': 'Clear Weat
her')
Published data Successfully: %s (%Temperature': 25, 'Message': 'DINE IN, RESTAUR
ANT AVAILABLE', 'Sign': 'Right Diversion', 'Speed': 'Limit Exceeded', 'Visibili
ty': 'Clear Weather')
Published data Successfully: %s (%Temperature': 2, 'Message': 'DINE IN, RESTAUR
ANT AVAILABLE', 'Sign': 'Left Diversion', 'Speed': 'Slow', 'Visibility': 'Fog Ahe
ad, Drive Slow')
Published data Successfully: %s (%Temperature': 93, 'Message': 'EMERGENCY, HOSPI
TAL NEARBY', 'Sign': 'Left Diversion', 'Speed': 'Moderate', 'Visibility': 'Clear
Weather')
Published data Successfully: %s (%Temperature': 62, 'Message': 'EMERGENCY, HOSPI
TAL NEARBY', 'Sign': 'Left Diversion', 'Speed': 'Slow', 'Visibility': 'Clear Wea
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TAL NEARBY', 'Sign': 'Left Diversion', 'Speed': 'Slow', 'Visibility': 'Clear Wea
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```

Delete

1 item selectedCancel

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	
✓	Board_1	Connected	Sign_Board	Device	Nov 14, 2022 12:19 PM		→ ...

IdentityDevice InformationRecent EventsStateLogs

×

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
status	{"Temperature":18,"Message":"DINE IN, RESTA..."}	json	a few seconds ago
status	{"Temperature":65,"Message":"SLOW DOWN, SC..."}	json	a few seconds ago
status	{"Temperature":70,"Message":"NEED HELP, POLI..."}	json	a few seconds ago
status	{"Temperature":8,"Message":"SLOW DOWN, SCH..."}	json	a few seconds ago

> ☐

weather_today

Disconnected

weather_device

Device

No

1 Simulation running

Event Payload

Event Name: status
Time Received: Nov 14, 2022 7:08 PM

```
1 {  
2   "Temperature": 9,  
3   "Message": "EMERGENCY, HOSPITAL NEARBY",  
4   "Sign": "Left Diversion",  
5   "Speed": "Slow",  
6   "Visibility": "Fog Ahead, Drive Slow"  
7 }
```

1 Simulation running

Node-RED

Flow 1

debug

11/14/2022, 7:09:11 PM node:3b1d3a16ac1b7df:kol-2/hype/Sign_BoardId/Board_1/ev/status/rm/json:msg payload: Object

```
{ Temperature: 54, Message: "DINE IN, RESTAURENT AVAILABLE", Sign: "Right Diversion", Speed: "Slow", Visibility: "Clear Weather" }
```

11/14/2022, 7:09:13 PM node:3b1d3a16ac1b7df:kol-2/hype/Sign_BoardId/Board_1/ev/status/rm/json:msg payload: Object

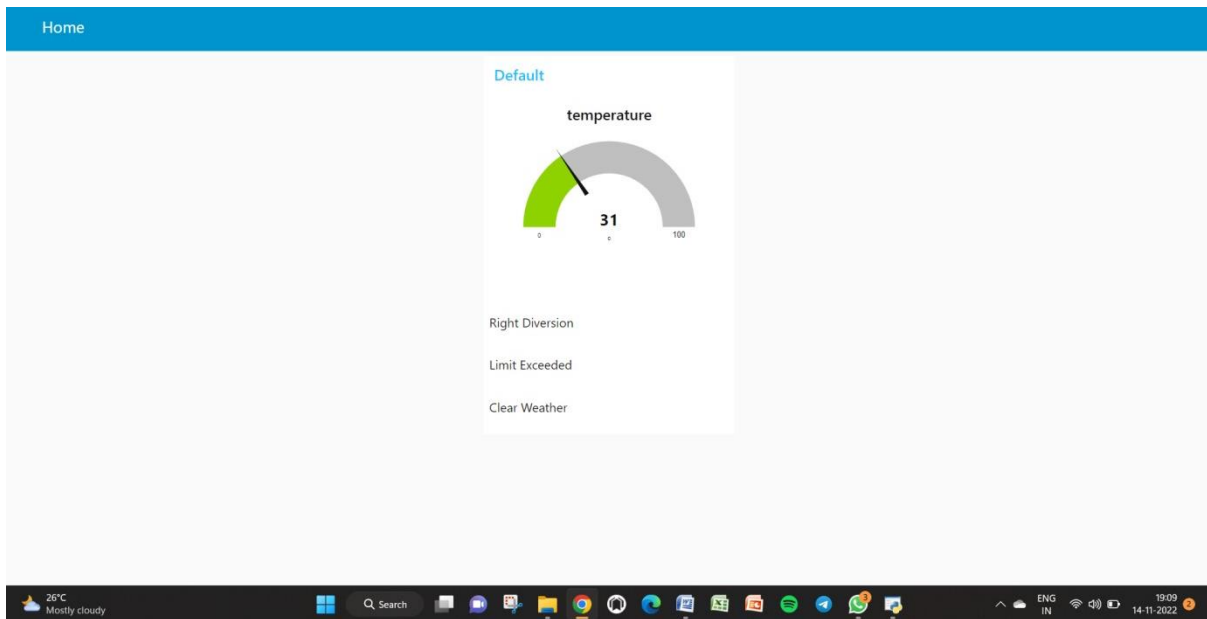
```
{ Temperature: 11, Message: "DINE IN, RESTAURENT AVAILABLE", Sign: "Right Diversion", Speed: "Moderate", Visibility: "Fog Ahead, Drive Slow" }
```

11/14/2022, 7:09:16 PM node:3b1d3a16ac1b7df:kol-2/hype/Sign_BoardId/Board_1/ev/status/rm/json:msg payload: Object

```
{ Temperature: 83, Message: "DINE IN, RESTAURENT AVAILABLE", Sign: "Left Diversion", Speed: "Limit Exceeded", Visibility: "Clear Weather" }
```

11/14/2022, 7:09:18 PM node:3b1d3a16ac1b7df:kol-2/hype/Sign_BoardId/Board_1/ev/status/rm/json:msg payload: Object

```
{ Temperature: 87, Message: "DINE IN, RESTAURENT AVAILABLE", Sign: "Right Diversion", Speed: "Limit Exceeded", Visibility: "Clear Weather" }
```



Node red : <https://node-red-rnlku-2022-11-04.eugb.mybluemix.net/ui/#!/0?socketid=45tMkCVwyfqy0tETAABh>