

Project Development Phase Sprint 4

Date	14 November 2022
Team ID	PNT2022TMID13653
Project Name	Project - Signs with smart connectivity for Better road safety

Code for print the random temperature, Road signs, Speed limit, Message :

(RandomValues.py)

```
import wiotp.sdk.device
import time import random
import
ibmiotf.application
import ibmiotf.device
import requests, json
myConfig = {
    #Configuration
    "identity": {
        "orgId": "n6r19n",
        "typeId": "NodeMCU",
        "deviceId": "621319106312"
    },
    #API Key
    "auth": {
        "token": "9876543210"
    }
}

#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 = "Salem, 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, RESTAURENT
AVAILABLE"
elif msg==5:
    message="PETROL BUNK NEARBY"
else:
    message=""

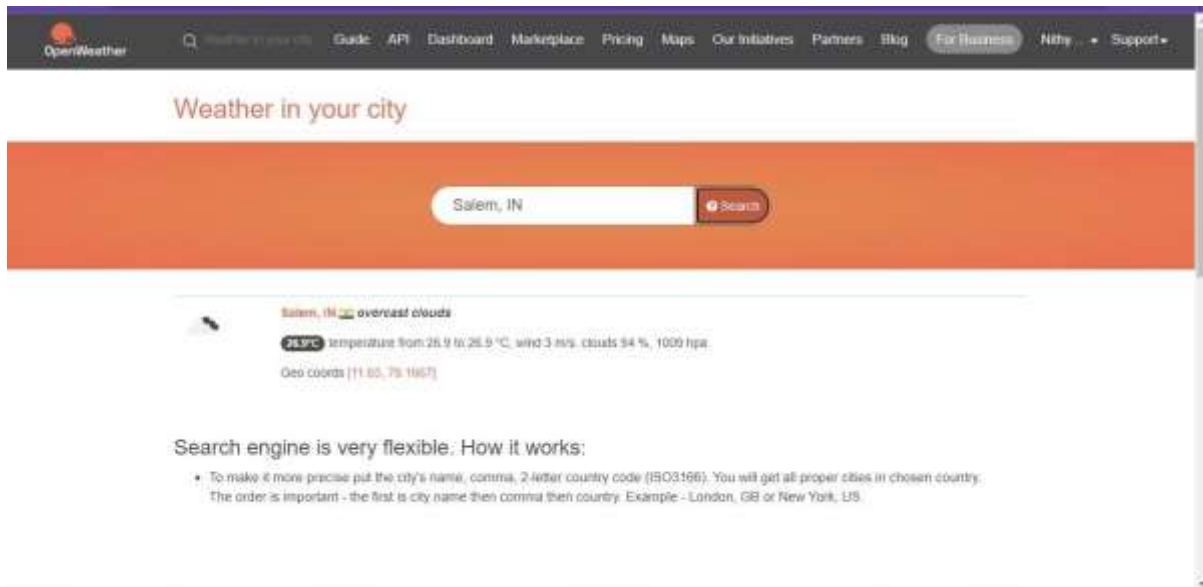
#Speed Limit part
speed=random.randint(0,150) if
speed>=100:
    speedMsg=" Limit Exceeded"
elif speed>=60 and speed<100:
    speedMsg="Moderate"
else:
    speedMsg="Slow"

#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()

```

Python Simulation :



Python IDLE Output :

