Project Development Phase Sprint IV

Date	14 November 2022
Team ID	PNT2022TMID42177
Project Name	Project - Signs with smart connectivity for Better road safety

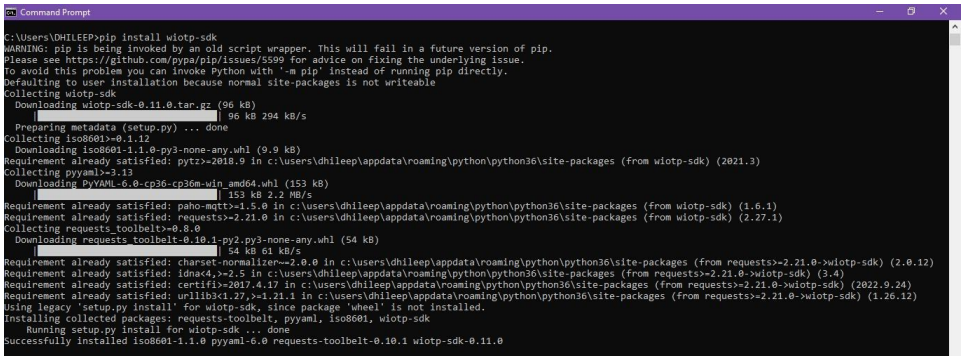
Code for print the random temperature, Road signs, Speed limit, Message :

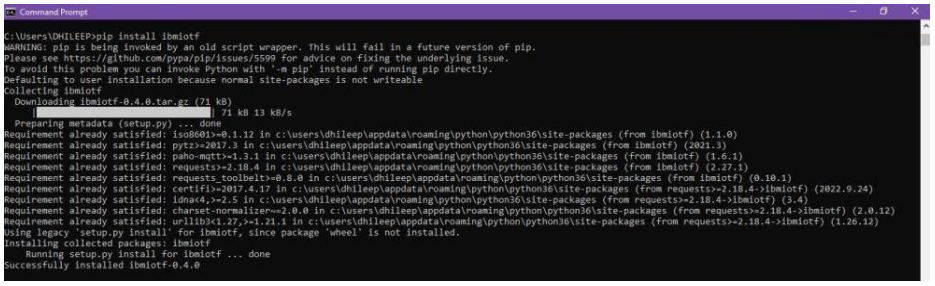
(RandomValues.py)

```
import wiotp.sdk.device
import time import random
import
ibmiotf.application
import ibmiotf.device
import requests, json
myConfig = {
    #Configuration
    "identity": {
        "orgId": "knubtc",
        "typeId": "raspberrypi",
        "deviceId":"123"
    },
    #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 = "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"
```

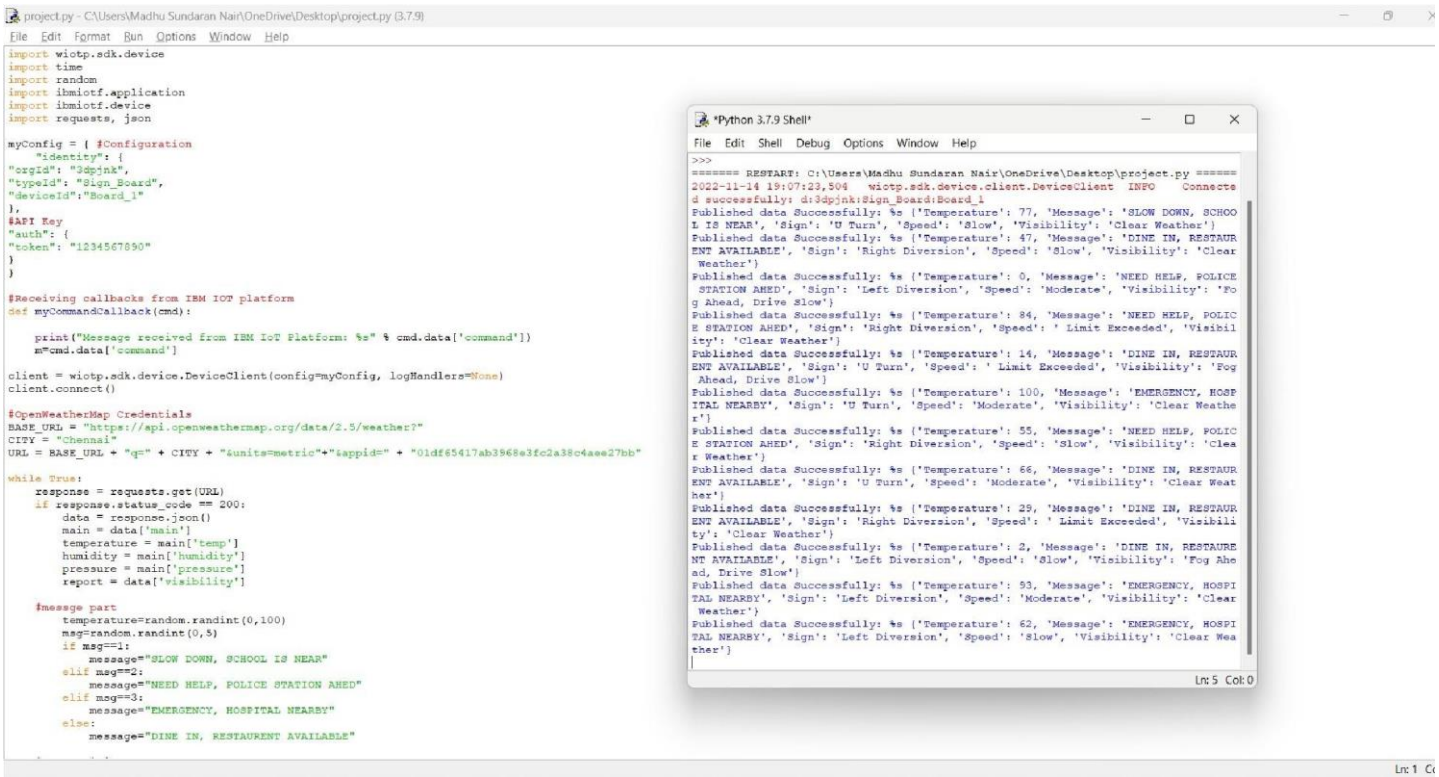
```
      elif msg==2: message="NEED HELP, POLICE
          STATION AHEAD"
      elif msg==3: message="EMERGENCY,
          HOSPITAL NEARBY"
      elif msg==4: message="DINE IN, RESTAURENT
          AVAILABLE"
      elif msg==5:
          message="PETROL BUNK NEARBY"
      else:
          message=""

       #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()
```

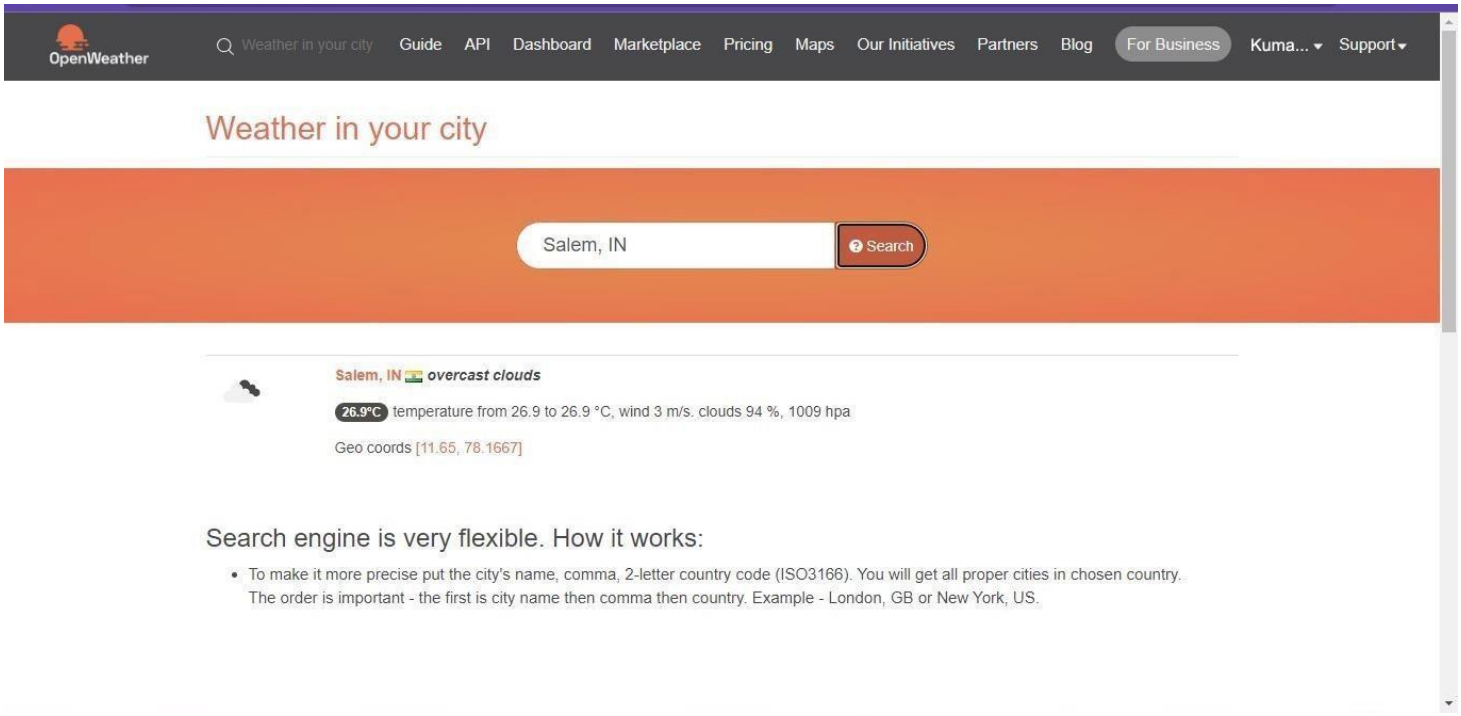
Import wiotp-sdk & ibmiotf :





OpenWeatherMap - (Ex., Salem, IN) :





Python IDLE Output :