

SPRINT – 1

Date	05 November 2022
Team ID	PNT2022TMID29675
Project Name	Signs with smart connectivity for Better Road Safety
Maximum Marks	4 Marks

ACCOUNT CREATION IN WEATHER API:

The screenshot displays the OpenWeather API website. The main heading is "Call current weather data". Below it, the text "How to make an API call" is followed by an "API call" section showing the URL: `https://api.openweathermap.org/data/2.5/weather?lat={lat}&lon={lon}&appid={API key}`. The "Parameters" section lists three parameters: `lat, lon` (required, Geographical coordinates), `appid` (required, Your unique API key), and `mode` (optional, Response format). A sidebar on the right lists various API features and endpoints. At the bottom, there is a cookie consent banner and a Windows taskbar showing the date as 16-11-2022.

PYTHON CODE:

#IBM Watson IOT Platform

#pip install wiotp-sdk

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

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "afblzo",
```

```
        "typeId": "raspberrypi",
```

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

```
    },
```

```
    "auth": {
```

```
        "token": "123456789"
```

```
    }
```

```
}
```

```
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:
```

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

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

```
    workingarea_distance=random.randint(0,60)
```

```
accidentalarea_distance=random.randint(1,25)
p="Your Prefered Speed"
q="Speed Limit is 30 km\hr"
r="Take another route"
s="As Your Wish"
t="Go Slow"
u="Moderate speed"
v="it's accidental area, Be Carefull"
w="Beyond the accidental area! Have a safe journey"
```

```
a={'Condition_for_Speed':p}
b={'Condition_for_Speed':q}
c={'Condition_for_Direction':r}
d={'Condition_for_Direction':s}
e={'Cond_for_Speed':t}
f={'Cond_for_Speed':u}
g={'Condition_for_Drive':v}
h={'Condition_for_Drive':w}
```

```
myData1={'Temperature':temperature}
myData2={'Vehiclescount':vehiclescount}
myData3={'WorkingArea_Distance':workingarea_distance}
myData4={'AccidentalArea_Distance':accidentalarea_distance}
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData1,qos=0,
onPublish=None)
```

```
    print("Published:%s",myData1)
```

```
    if temperature>=21:
```

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

```
        print(a)
```

```
        print("\n")
```

```
    else :
```

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

```
        print(b)
```

```
        print("\n")
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData2,qos=0,
onPublish=None)
```

```
    print("Published:%s",myData2)
```

```
    if vehiclescount>=53:
```

```
client.publishEvent(eventId="status",msgFormat="json",data=c,qos=0,onPublis
h=None)
```

```
    print(c)
```

```
    print("\n")
```

```
    else:
```

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

```
    print(d)
```

```
    print("\n")
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData3,qos=0,onPublish=None)
```

```
    print("Published:%s",myData3)
```

```
    if workingarea_distance >= 4:
```

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

```
        print(f)
```

```
        print("\n")
```

```
    else :
```

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

```
        print(e)
```

```
        print("\n")
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData4,qos=0,  
onPublish=None)
```

```
    print("Published:%s",myData4)
```

```
    if accidentalarea_distance >= 3:
```

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

```
        print(h)
```

```

        print("\n")

    else :

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

        print(g)

        print("\n")

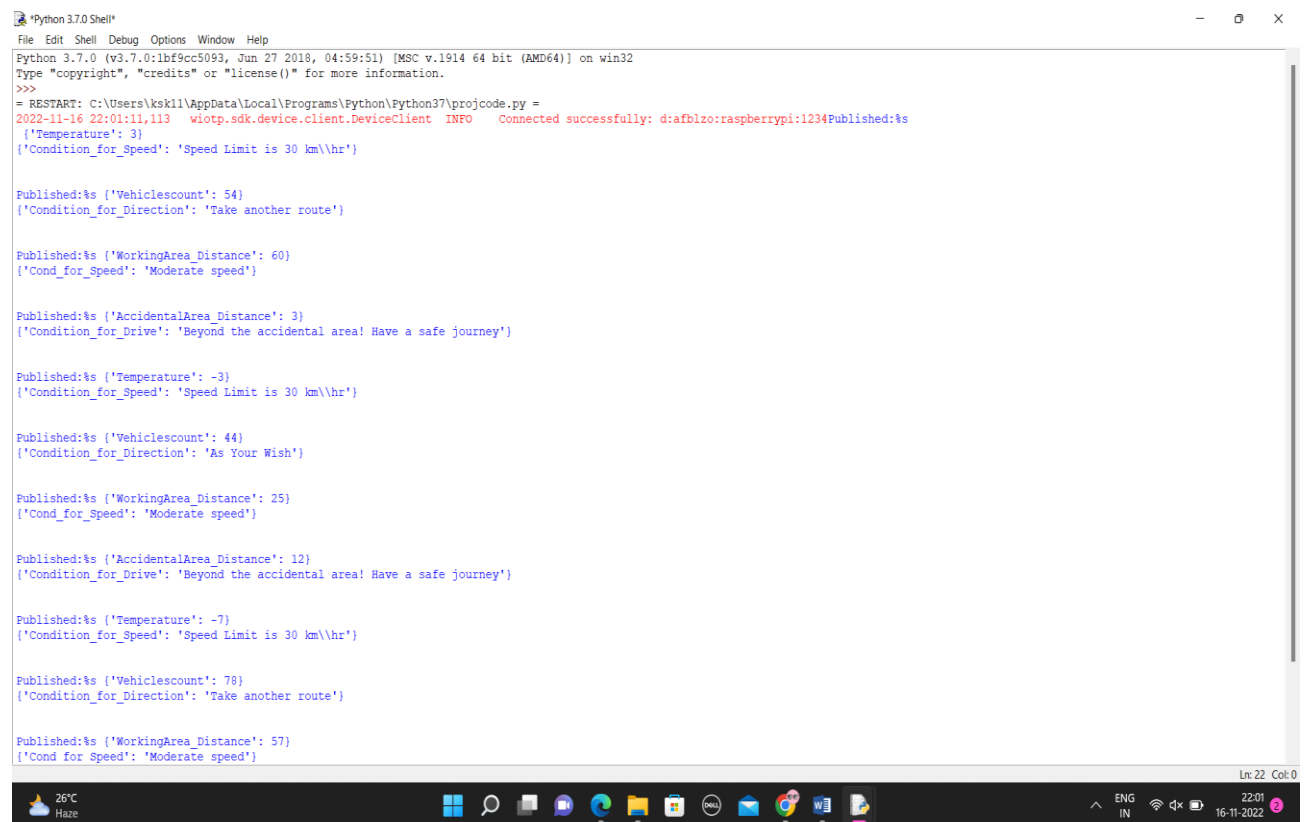
client.commandCallback=myCommandCallback

time.sleep(10)

client.disconnect()

```

OUTPUT:



```

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2019, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\ksk11\AppData\Local\Programs\Python\Python37\projcode.py =
2022-11-16 22:01:11.113 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:afblzo:raspberrypi:1234Published:%s
{'Temperature': 3}
{'Condition_for_Speed': 'Speed Limit is 30 km\\hr'}

Published:%s {'Vehiclescount': 54}
{'Condition_for_Direction': 'Take another route'}

Published:%s {'WorkingArea_Distance': 60}
{'Cond_for_Speed': 'Moderate speed'}

Published:%s {'AccidentalArea_Distance': 3}
{'Condition_for_Drive': 'Beyond the accidental area! Have a safe journey'}

Published:%s {'Temperature': -3}
{'Condition_for_Speed': 'Speed Limit is 30 km\\hr'}

Published:%s {'Vehiclescount': 44}
{'Condition_for_Direction': 'As Your Wish'}

Published:%s {'WorkingArea_Distance': 25}
{'Cond_for_Speed': 'Moderate speed'}

Published:%s {'AccidentalArea_Distance': 12}
{'Condition_for_Drive': 'Beyond the accidental area! Have a safe journey'}

Published:%s {'Temperature': -7}
{'Condition_for_Speed': 'Speed Limit is 30 km\\hr'}

Published:%s {'Vehiclescount': 78}
{'Condition_for_Direction': 'Take another route'}

Published:%s {'WorkingArea_Distance': 57}
{'Cond for Speed': 'Moderate speed'}
Ln: 22 Col: 0

```