

DEVELOP THE PYTHON SCRIPT

Publish data to the IBM Cloud

Date : 21 October 2022

Team ID : PNT2022TMID37707

Project Name - SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

To make a Publisher and Subscriber in the process of Python and IBM cloud

```
#Through python coding We are going to access the Subscriber and p
import paho.mqtt.client as paho
import time
import random

def on_publish(client, usrdata, mid):
    print("Publish the data ")

client = paho.Client()
client.on_publish = on_publish
client.connect('broker.mqttdashboard.com', 1883)
client.loop_start()
while True:
    temp = random.randint(1,30)
    (rc,mid)= client.publish('iottopic',str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

```
File Edit Format Run Options Window Help
import paho.mqtt.client as paho
def on_subscribe(client,usrdata,mid,grated_qos):
    print("subscribe:" + str(mid)+str(granted_qos))

def on_message(client, usrdata,msg):
    print(msg.topic + "" + str(msg.qos) + "" + str(msg.payload))

client=paho.Client()
client.on_subscribe = on_subscribe
client.on_message = on_message
client.connect('broker.mqttdashboard.com', 1883)
client.subscribe
```

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publish.py - D:/Python/Python310/publish.py (3.10.8)

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```
#Through python coding We are going to access the Subscriber
import paho.mqtt.client as paho
import time
import random

def on_publish(client, userdata, mid):
    print("Publish the data ")

client = paho.Client()
client.on_publish = on_publish
client.connect('broker.mqttdashboard.com', 1883)
client.loop_start()
while True:
    temp = random.randint(1,30)
    (rc,mid)= client.publish('iottopic',str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

Command Prompt - python publish.py

```
C:\Users\USER>python publish.py
15
Publish the data
4
Publish the data
```

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subscribe.py - D:/Python/Python310/subscribe.py (3.10.8)

File Edit Format Run Options Window Help

```
import paho.mqtt.client as paho
def on_subscribe(client,userdata,mid,grated_qos):
    print("subscribe:" + str(mid)+str(granted_qos))

def on_message(client, userdata,msg):
    print(msg.topic + " " + str(msg.qos) + " " + str(msg.payload))

client=paho.Client()
client.on_subscribe = on_subscribe
client.on_message = on_message
client.connect('broker.mqttdashboard.com', 1883)
client.subscribe('iottopic',qos=1)
client.loop_forever()
```

Command Prompt - python subscribe.py

```
C:\Users\USER>python subscribe.py
{"coord
P: 300
P: 320}
Microsoft Windows [Version 10.0.19044.2006]
(c) Microsoft Corporation. All rights reserved.
9800
```

Command Prompt - python publish.py

```
C:\Users\USER>python publish.py
15
Publish the data
4
Publish the data
9
Publish the data
1
Publish the data
9
Publish the data
24
Publish the data
16
Publish the data
11
Publish the data
13
Publish the data
26
Publish the data
17
Publish the data
```

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Welcome to Project! Delight...

IBM

NalaiyaThiran-Training & Pro...

IBM Cloud

IBM Watson IoT Platform

7kb3es.internetofthings.ibmcloud.com/dashboard/boards/

IBM Watson IoT Platform

410119106009@smartinternz.com
ID: 7kb3es

Your boards

Public boards

Create New Board

IOT MONITOR BOARD

No cards

Owned by you

USAGE OVERVIEW

3 Cards

Owned by you

RISK AND SECURITY OVERVIEW

4 Cards

Owned by you

Boards shared with you

1 Simulation running

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Welcome to Project! Delight...

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IBM Cloud

IBM Watson IoT Platform

7kb3es.internetofthings.ibmcloud.com/dashboard/boards/91540bce-5e4a-4aca-9612-236ab43a8649

IBM Watson IoT Platform

410119106009@smartinternz.com
ID: 7kb3es

Iot monitor board

Add New Card

Settings

Line chart

150

100

50

0

23:17

23:18

23:19

23:20

23:21

5 minutes

now

randomNumber

sampleObject.xcord

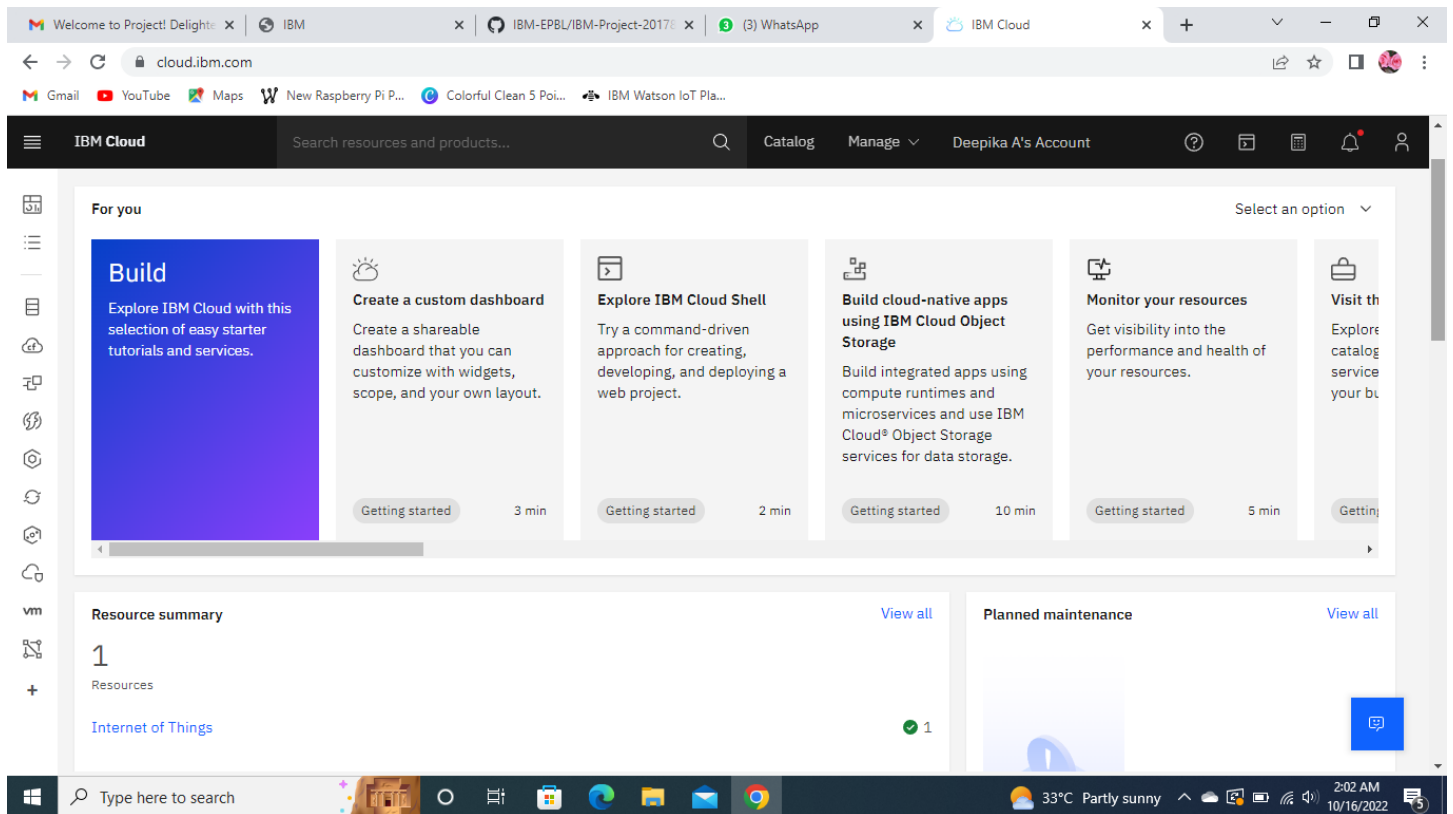
sampleObject.ycord

1 Simulation running

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PROGRAM

#IBM
Watson
IOT
Platform

```
#pip install wiotp-sdk

import wiotp.sdk.device

import time

import random

myConfig = {
    "identity": {
        "orgId": "hj5fmy",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "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()

```