

Develop a python script Publish Data to the IBM Cloud

Date	13 November 2022
Team ID	PNT2022TMID17531
Project Name	Project - Signs with smart connectivity for Better road safety
Maximum Marks	4 Marks

Signs with smart connectivity for Better road safety

The screenshot shows a Windows desktop environment. In the foreground, a text editor window titled 'publish.py - E:/IBM/Others/Develop a python script/publish.py (3.6.5)' contains a Python script. The script imports 'paho.mqtt.client' as 'paho', 'time', and 'random'. It defines a function 'on_publish' that prints 'Publish the data'. The main code block creates a 'paho.Client()', sets 'on_publish' as the callback, connects to 'broker.Mqttddashboard.com' on port 1883, starts the loop, and enters a 'while True' loop. Inside the loop, it generates a random integer between 1 and 30, publishes it to the topic 'iottopic', prints the value, and sleeps for 10 seconds. In the background, a 'Python 3.6.5 Shell' window shows the output of the script, displaying the message 'Publish the data' four times. The Windows taskbar at the bottom shows the date as 11/3/2022 and the time as 7:09 PM.

```
#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.Mqttddashboard.com', 1883)
client.loop_start()
while True:
    temp = random.randint(1,30)
    (re,mid) = client.publish('iottopic',str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MS
C v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more informatio
n.
>>>
===== RESTART: E:/IBM/Others/Develop a python script/
publish.py =====
7
Publish the data
19
Publish the data
10
Publish the data
```

```
subscribe.py - E:/IBM/Others/Develop a python script/subscribe.py (3.6.5)
File Edit Format Run Options Window Help

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

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

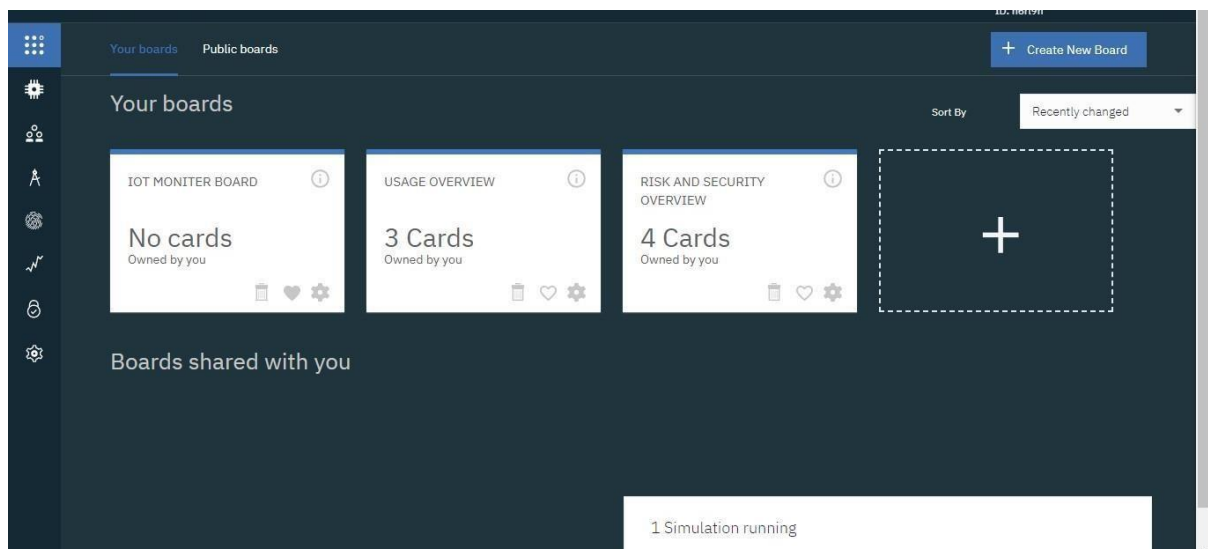
client = paho.Client()
client.on_subscribe = on_subscribe
client.on_message = on_message
client.connect("broker.mqttdashboard.com", 1883)
client.subscribe("iottopic",qos=1)
client.loop_forever()
```

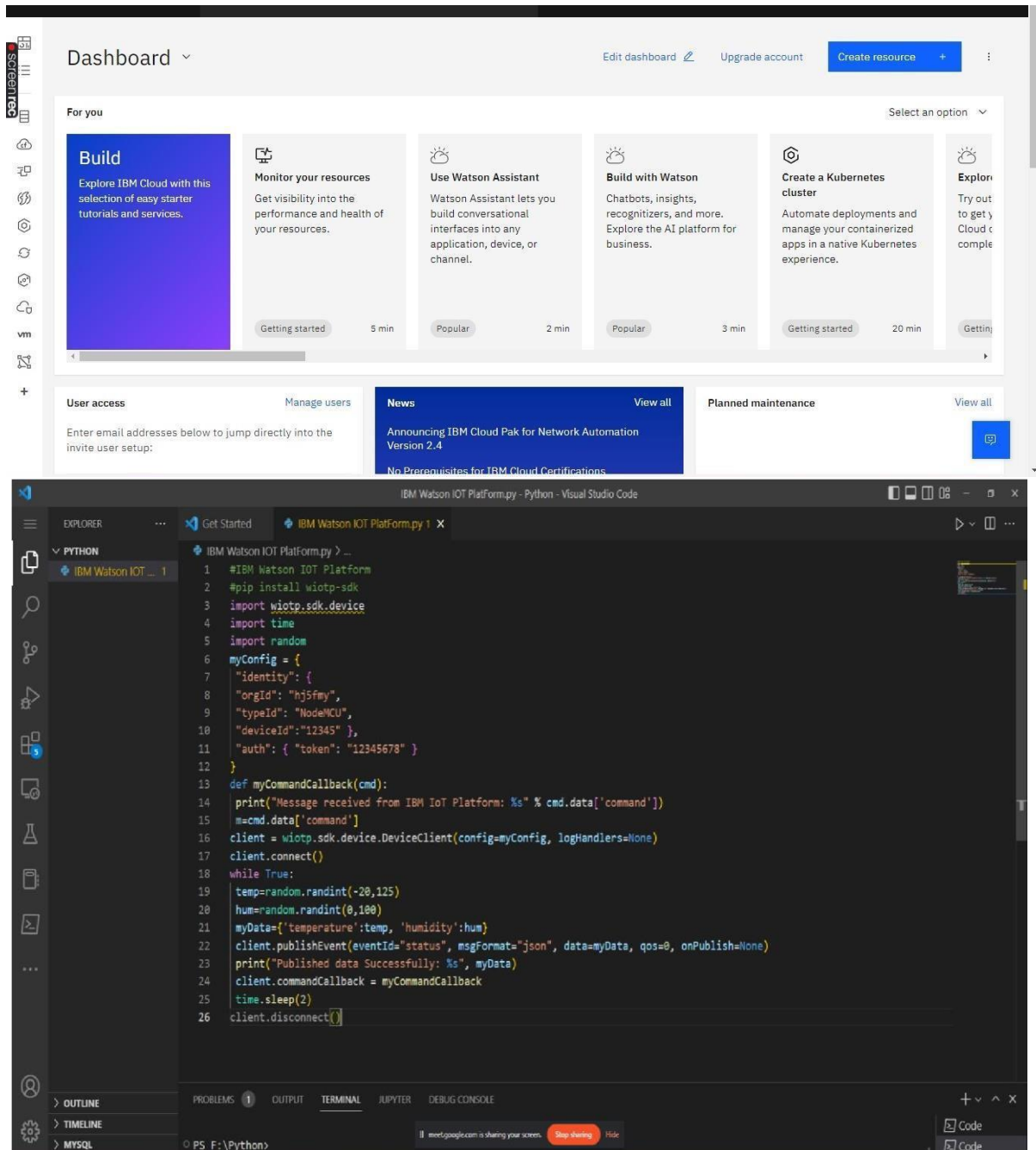
```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help

Publish the data
13
Publish the data
3
Publish the data
25
Publish the data
19
Publish the data
2
Publish the data
7
Publish the data
9
Publish the data
```

Ln: 5 Col: 0 Ln: 2 Col: 15

25°C Cloudy 7:20 PM 11/3/2022





CODE:

#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(con
    fig=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

```