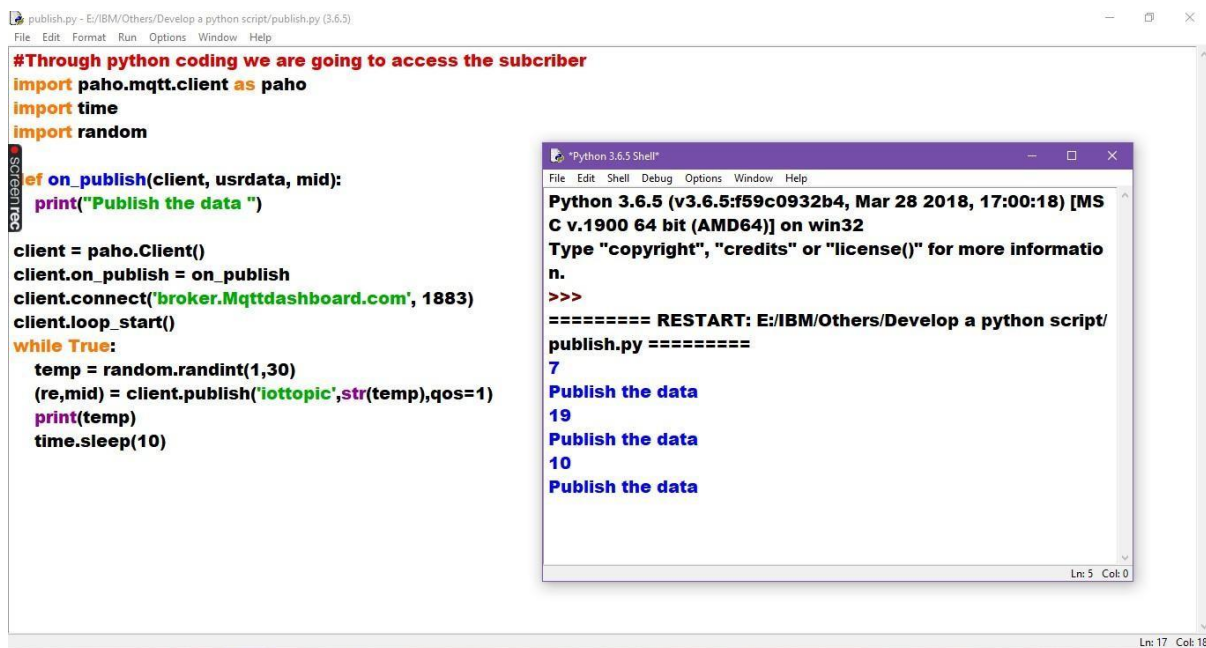


Develop a python script Publish Data to the IBM Cloud

Team ID	PNT2022TMID52316
Project Name	Signs with Smart Connectivity for Better RoadSafety

Signs with smart connectivity for Better road safety



The screenshot shows a Python script named `publish.py` in a text editor. The script is designed to publish data to the IBM Cloud IoT Platform. It includes a comment: `#Through python coding we are going to access the subscriber`. The script imports `paho.mqtt.client` as `paho`, `time`, and `random`. It defines a function `on_publish` that prints the data being published. The main logic creates a `paho.Client` object, sets `on_publish` as the callback, connects to `broker.mqttdashboard.com` on port 1883, and starts the MQTT loop. A `while True` loop generates random integers between 1 and 30, publishes them to the topic `iottopic` with a QoS of 1, and sleeps for 10 seconds.

Overlaid on the script is a terminal window titled "Python 3.6.5 Shell". It shows the output of running the script: a restart message, followed by three lines of "Publish the data" with values 7, 19, and 10.

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

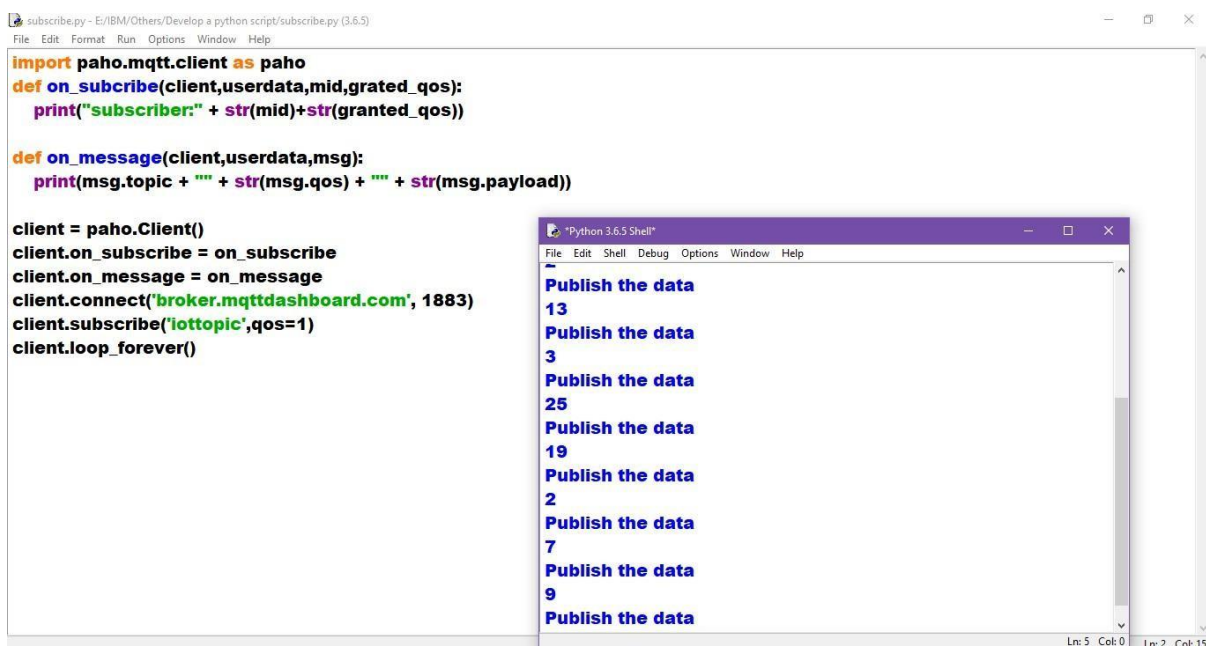
#Through python coding we are going to access the subscriber
import paho.mqtt.client as paho
import time
import random

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)
    (re,mid) = client.publish('iottopic',str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

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

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 informati
n.
>>>
===== RESTART: E:/IBM/Others/Develop a python script/
publish.py =====
7
Publish the data
19
Publish the data
10
Publish the data
```



The screenshot shows a Python script named `subscribe.py` in a text editor. The script is designed to subscribe to data from the IBM Cloud IoT Platform. It imports `paho.mqtt.client` as `paho`. It defines two functions: `on_subscribe`, which prints the subscription status, and `on_message`, which prints the received message topic, QoS, and payload. The main logic creates a `paho.Client` object, sets the callback functions, connects to `broker.mqttdashboard.com` on port 1883, subscribes to the topic `iottopic` with a QoS of 1, and starts the `loop_forever`.

Overlaid on the script is a terminal window titled "Python 3.6.5 Shell". It shows the output of running the script: a "Publish the data" message followed by a series of values (13, 3, 25, 19, 2, 7, 9) and another "Publish the data" message.

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

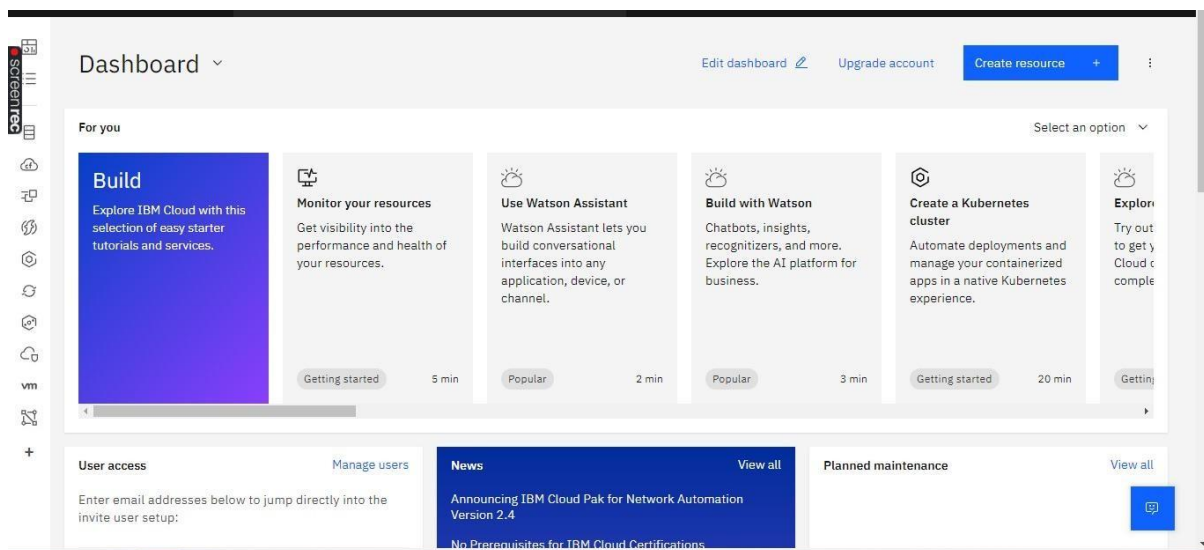
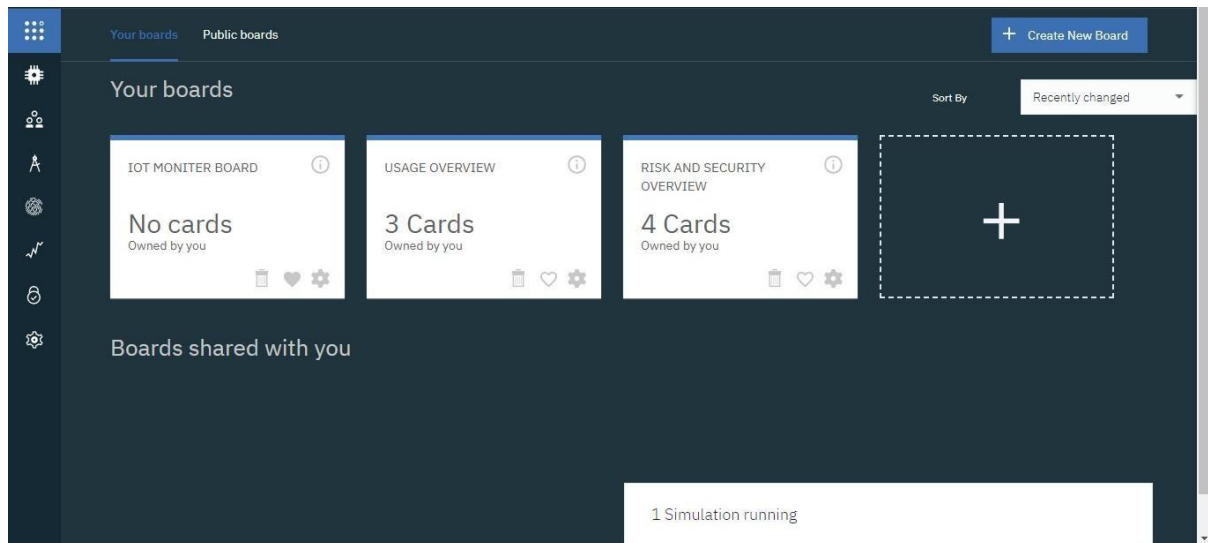
import paho.mqtt.client as paho
def on_subscribe(client,userdata,mid,grated_qos):
    print("subscriber:" + str(mid)+str(granted_qos))

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
```



Program :

#IBM Watson IOT Platform

#pip install wiotp-sdk

import wiotp.sdk.device

import time

import random

```

myConfig = {
    "identity": {
        "orgId": "kjbrqi",
        "typeId": "temp",
        "deviceId": "89032" },
    "auth": { "token": "WjW4q@Ko(QVhH(GjZN" }
}
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()

```