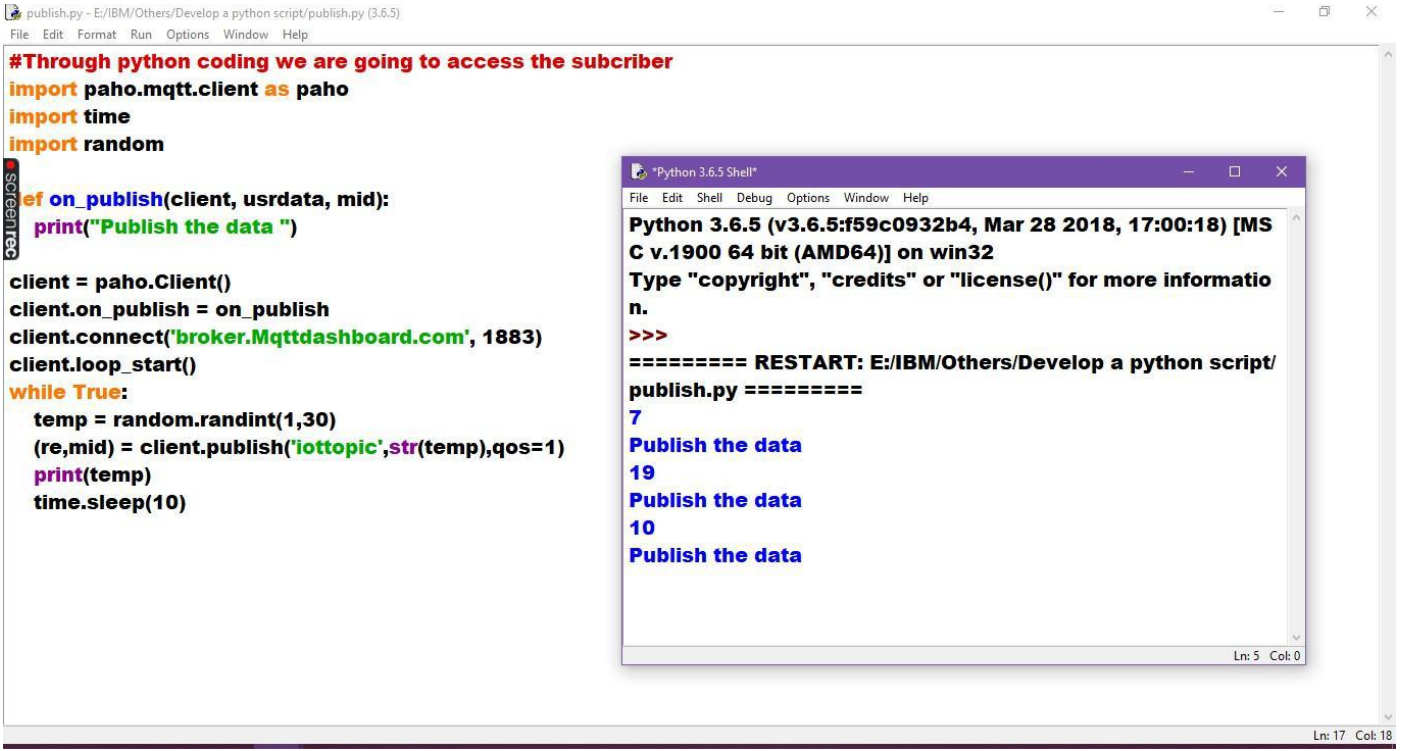


DEVELOP a PYTHON SCRIPT

Publish Data to the IBM Cloud

DATE:	31-10-2022
TEAM ID:	PNT2022TMID26590
PROJECT NAME:	SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

Signs With Smart Connectivity For Better Road Safety



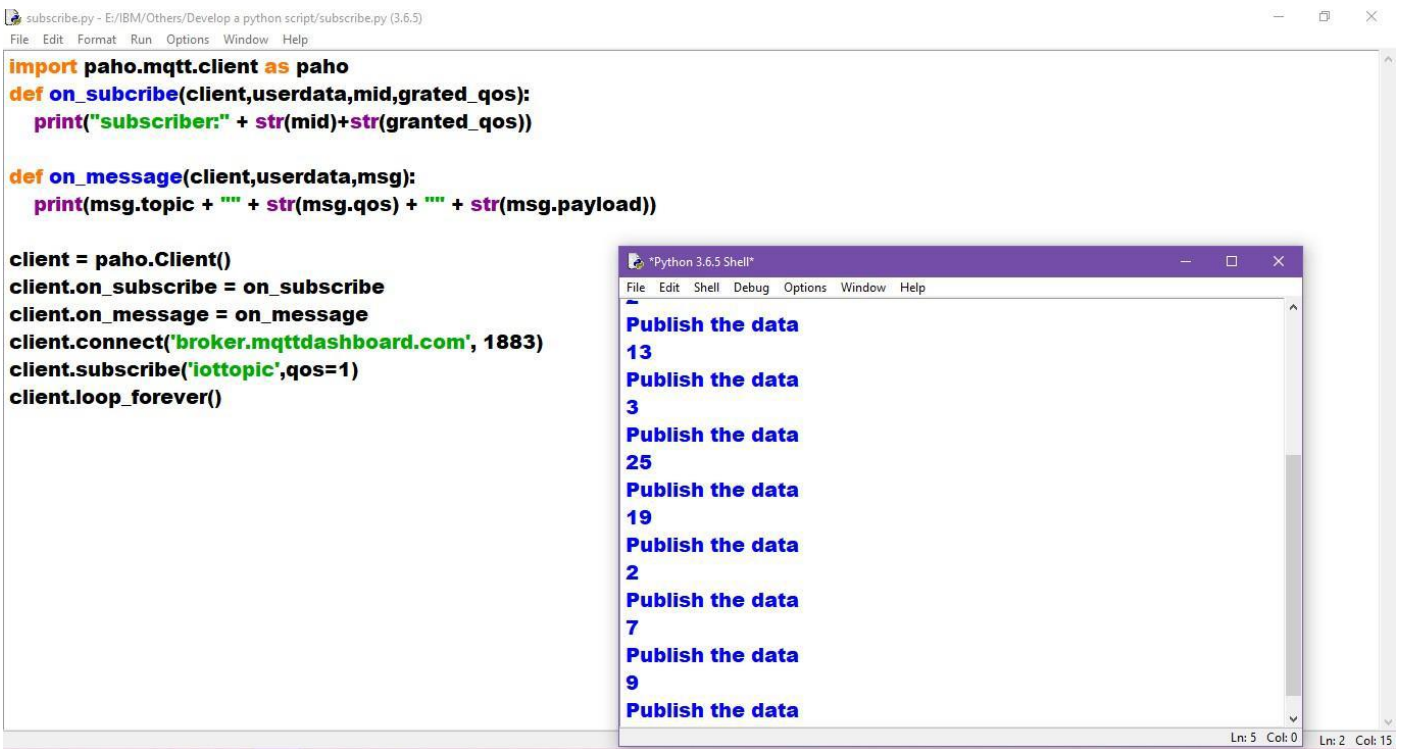
The screenshot shows a Python script editor with the file 'publish.py' open. The script is designed to publish data to the IBM Cloud. It includes a comment: '#Through python coding we are going to access the subscriber'. The script imports 'paho.mqtt.client as paho', 'time', and 'random'. It defines a function 'on_publish' that prints 'Publish the data'. The main logic creates a 'paho.Client()', sets 'on_publish' as the callback, connects to 'broker.mqttdashboard.com' on port 1883, and enters a 'while True' loop. In the loop, it generates a random number between 1 and 30, publishes it to the 'iottopic' with a QoS of 1, prints the value, and sleeps for 10 seconds. A terminal window titled 'Python 3.6.5 Shell' shows the output of the script, displaying the message 'Publish the data' followed by the numbers 7, 19, 10, and 10.

```
#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 (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
```



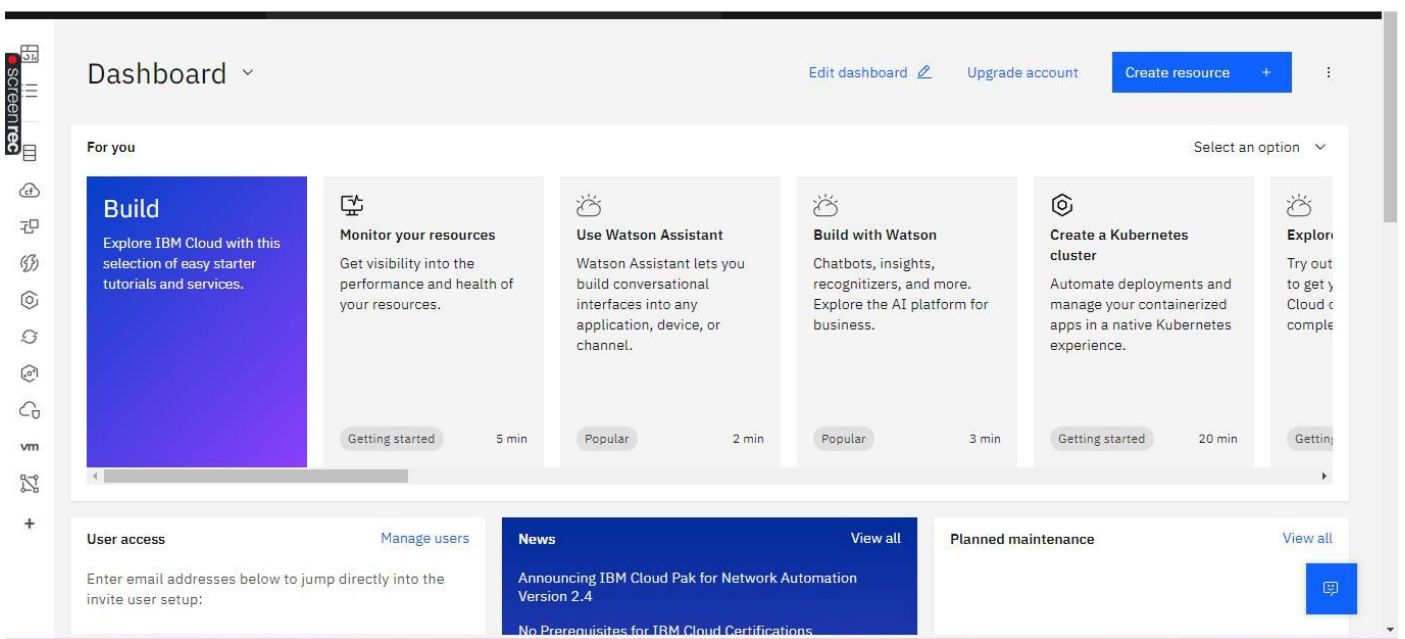
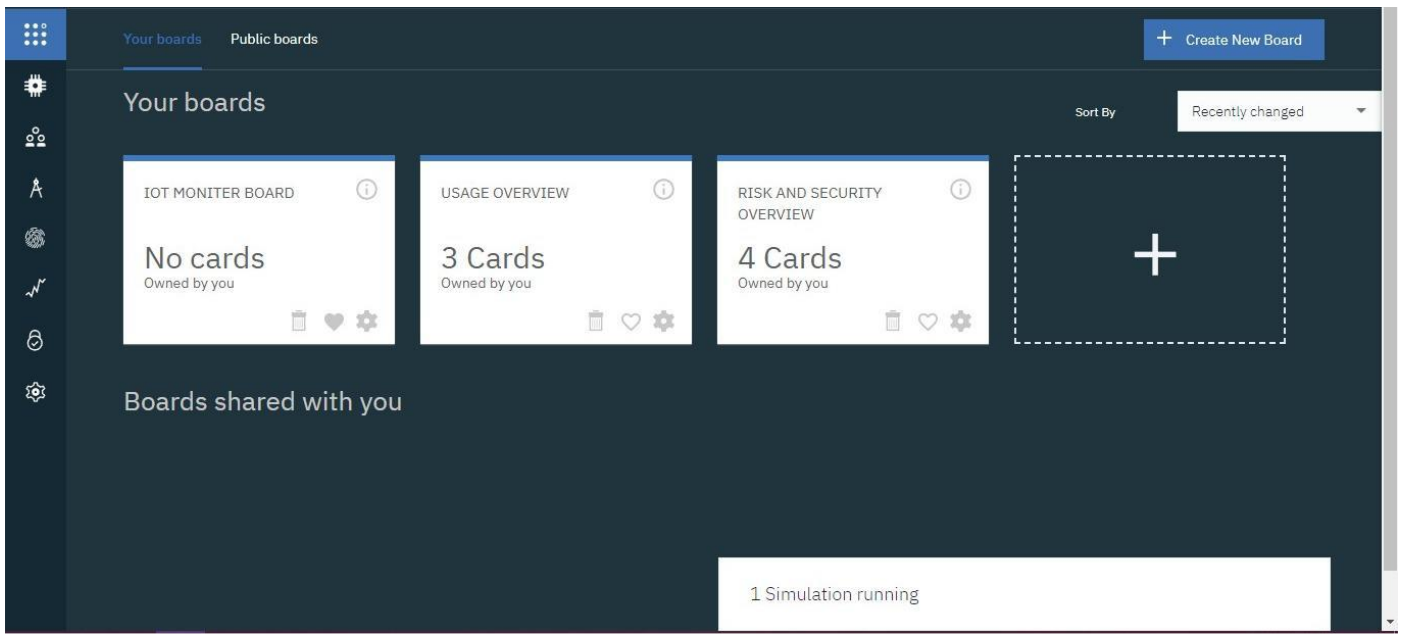
The screenshot shows a Python script editor with the file 'subscribe.py' open. The script is designed to subscribe to data from the IBM Cloud. It imports 'paho.mqtt.client as paho'. It defines a function 'on_subscribe' that prints the subscriber ID and granted QoS, and a function 'on_message' that prints the topic, QoS, and payload. The main logic creates a 'paho.Client()', sets 'on_subscribe' and 'on_message' as callbacks, connects to 'broker.mqttdashboard.com' on port 1883, subscribes to the 'iottopic' with a QoS of 1, and enters a 'loop_forever()' loop. A terminal window titled 'Python 3.6.5 Shell' shows the output of the script, displaying the message 'Publish the data' followed by the numbers 13, 3, 25, 19, 2, 7, 9, and 15.

```
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
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": "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()
```