Develop a python script
Publish Data to the IBM Cloud

SMART WASTE MANAGEMENT SYSTEM
FOR METROPOLITIAN CITIES

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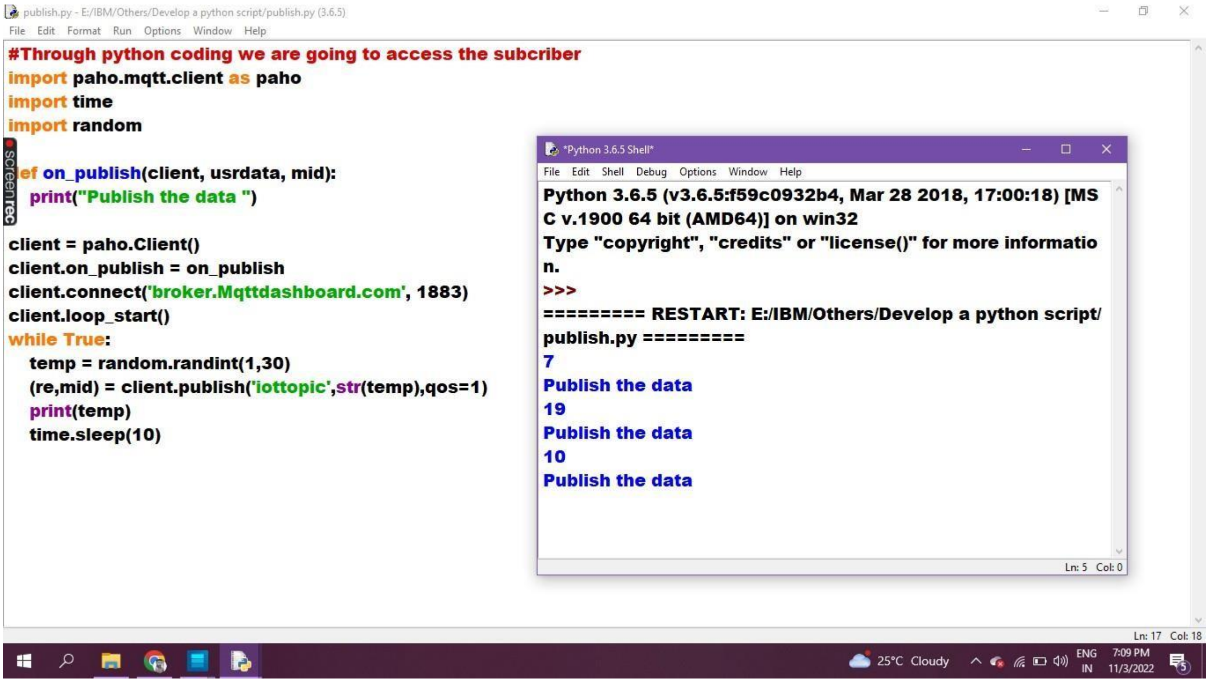
publish.py - E:/IBM/Others/Develop a python script/publish.py (3.6.5)
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Python 3.6.5 Shell
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```
#Through python coding we are going to access the subcriber
import paho.mqtt.client as paho
import time
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)
    (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
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publish.py =========
7
Publish the data
19
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```

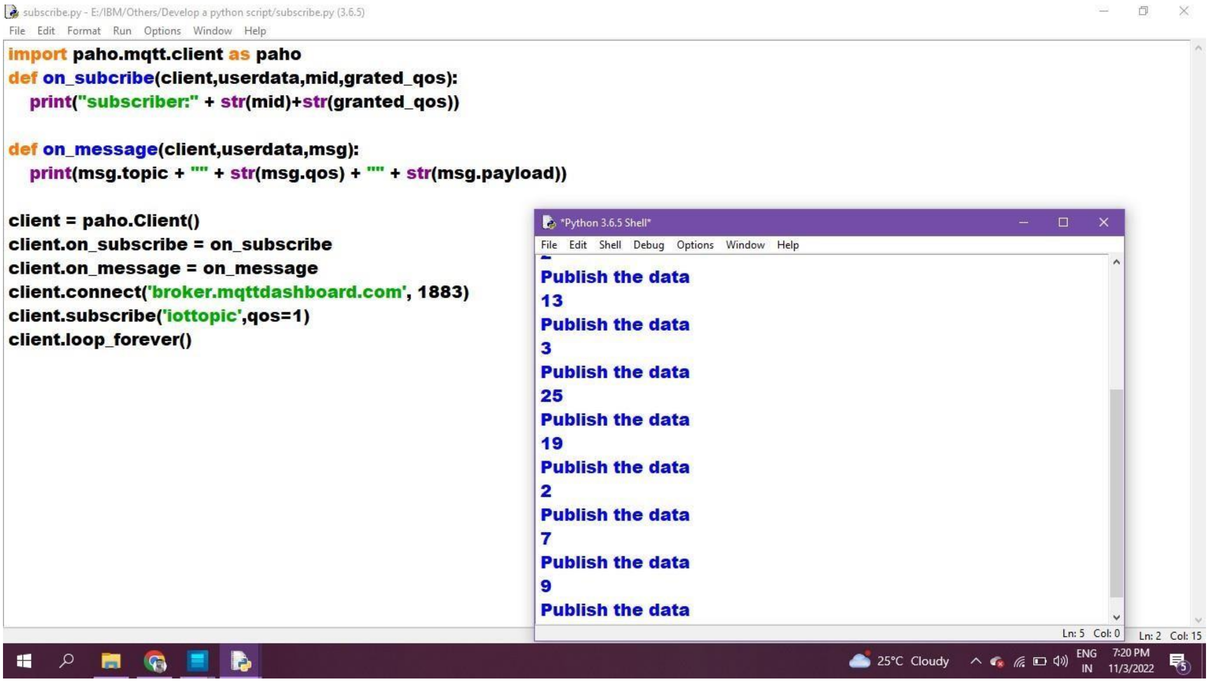
subscribe.py - E:/IBM/Others/Develop a python script/subscribe.py (3.6.5)
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Python 3.6.5 Shell
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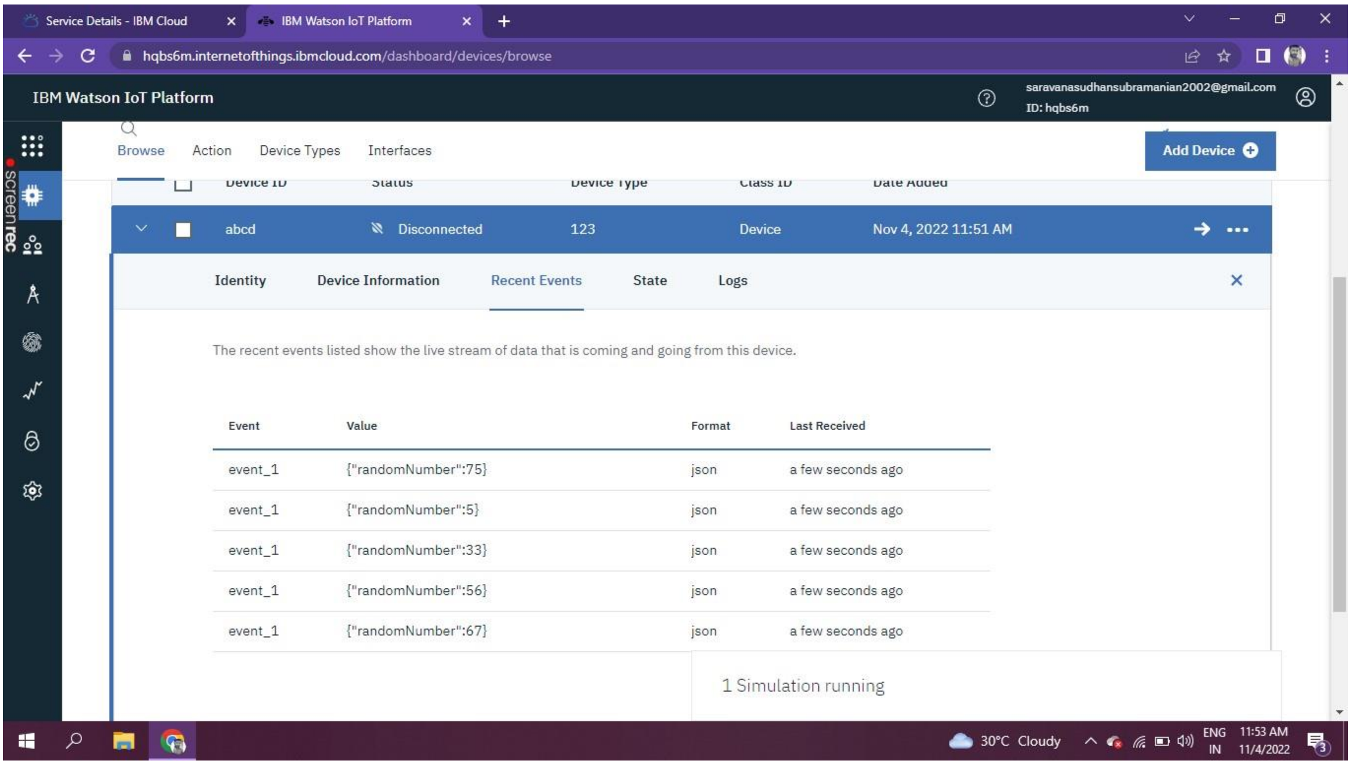
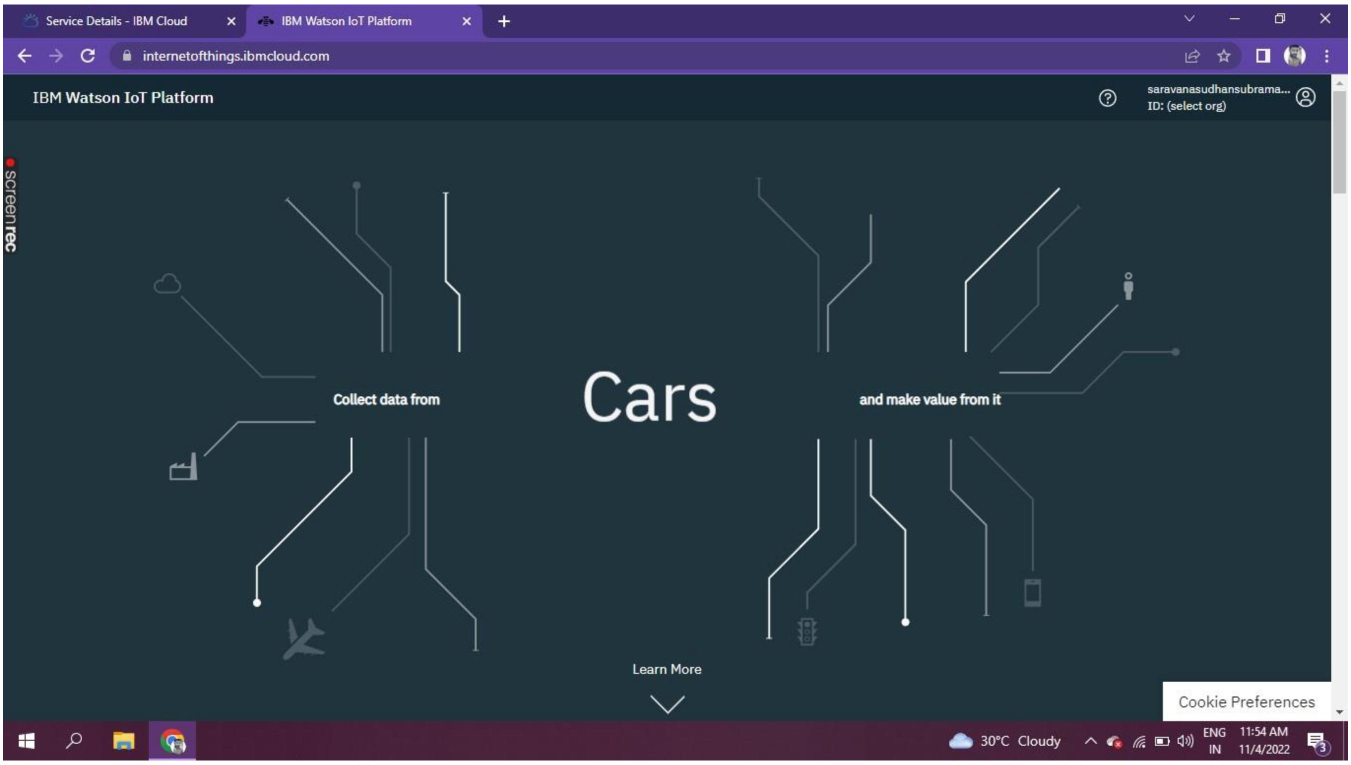
```
import paho.mqtt.client as paho
def on_subcribe(client,userdata,mid,grated_qos):
    print("subscriber:" + str(mid)+str(granted_qos))

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()
```

```
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
```



The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	{"randomNumber":75}	json	a few seconds ago
event_1	{"randomNumber":5}	json	a few seconds ago
event_1	{"randomNumber":33}	json	a few seconds ago
event_1	{"randomNumber":56}	json	a few seconds ago
event_1	{"randomNumber":67}	json	a few seconds ago



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()
```