

**Develop a python script
Publish Data to the IBM Cloud**

**SMART WASTE MANAGEMENT SYSTEM
FOR METROPOLITAN CITIES**

STUDENT NAME : B.Karthik – TEAM LEADER

Pooja D – TEAM MEMBER

Raghubharathi S P -TEAM MEMBER

Prithikalakshmi B – TEAM MEMBER

The image displays two screenshots of a Python IDE (likely PyCharm) showing code for publishing and subscribing to MQTT topics. The first screenshot shows the publishing code, and the second screenshot shows the subscribing code. Both screenshots include a terminal window showing the output of the code.

First Screenshot: Publishing Code

```
#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)
```

Terminal Output (First Screenshot):

```
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
```

Second Screenshot: Subscribing Code

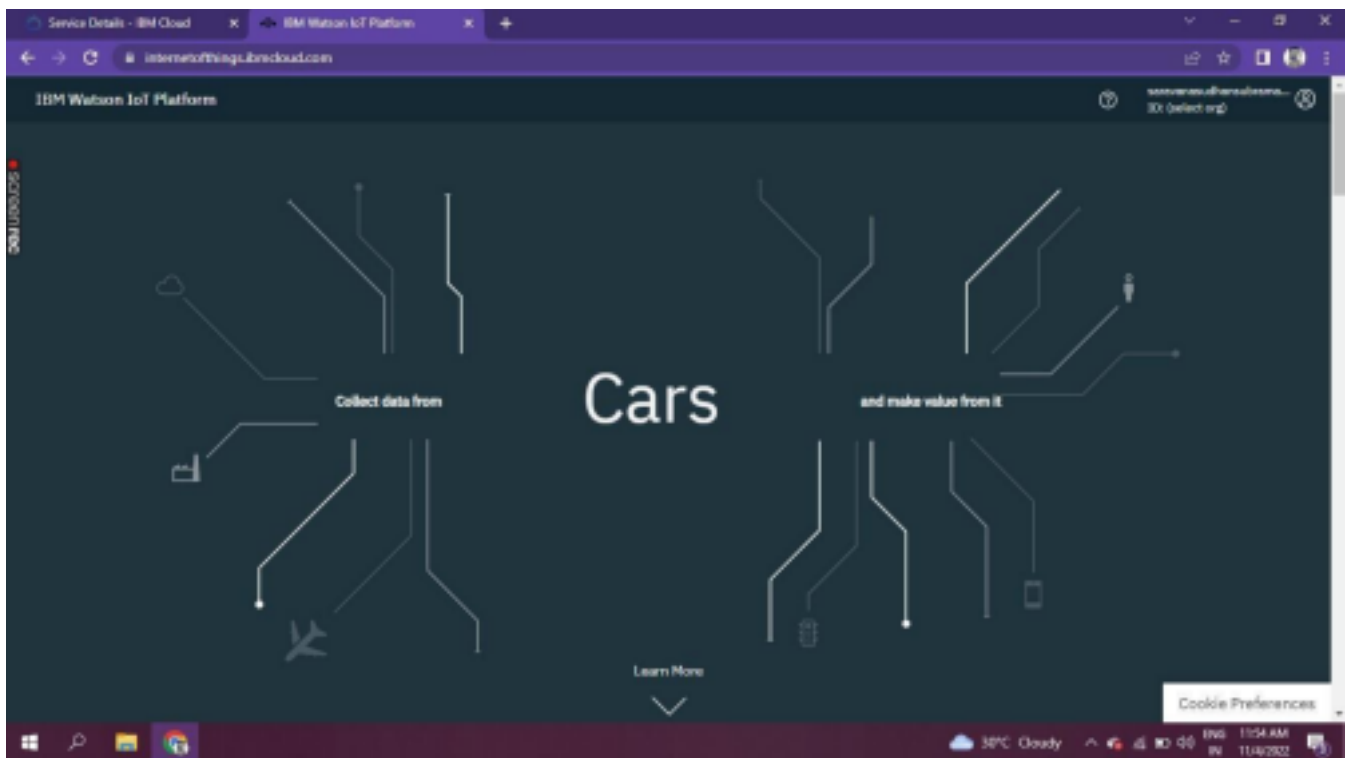
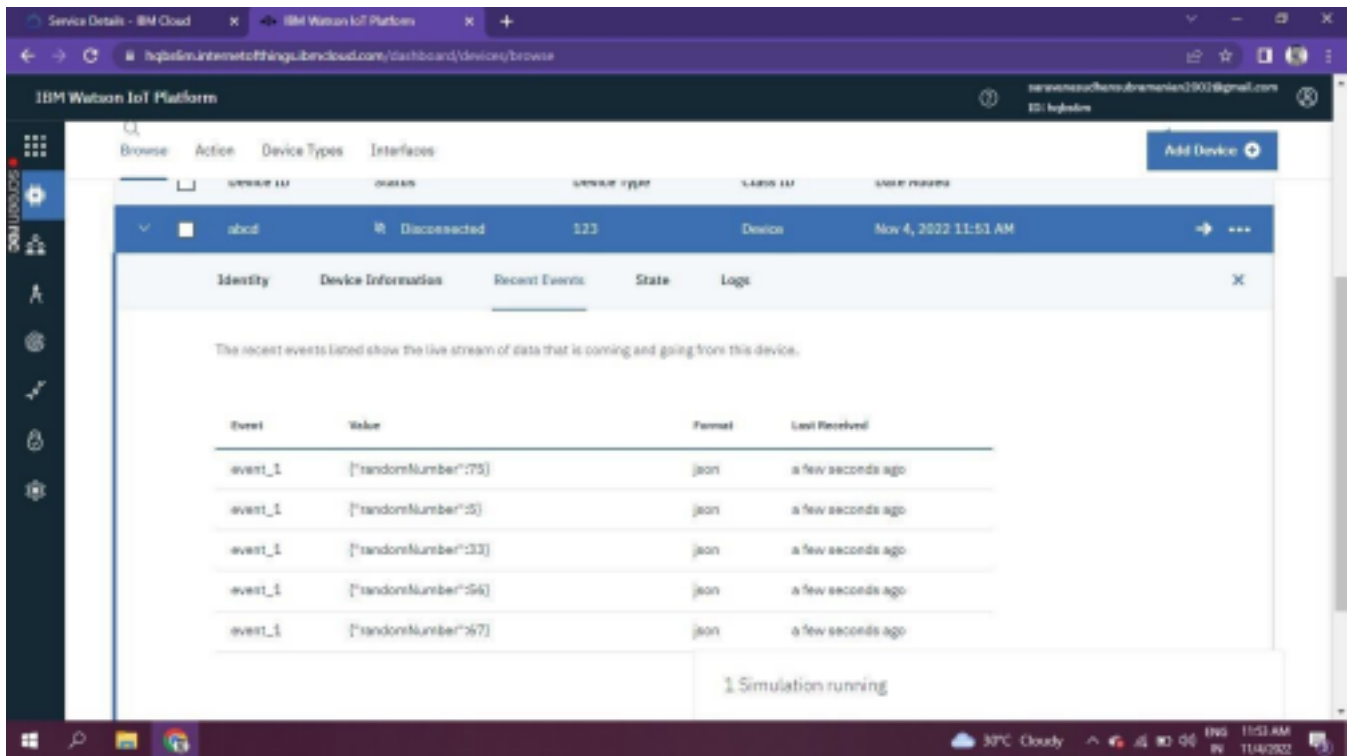
```
import paho.mqtt.client as paho
def on_subscribe(client,userdata,mid,grated_qos):
    print("subscriber:" + str(mid)+str(granted_qos))

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()
```

Terminal Output (Second Screenshot):

```
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()

```