

DEVELOP THE PYTHON SCRIPT(PUBLISH DATA TO IBM CLOUD)

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Project Name	Industry-Specific Intelligent Fire Management System



The screenshot displays a Python IDE with a file named 'publish.py'. The code is as follows:

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

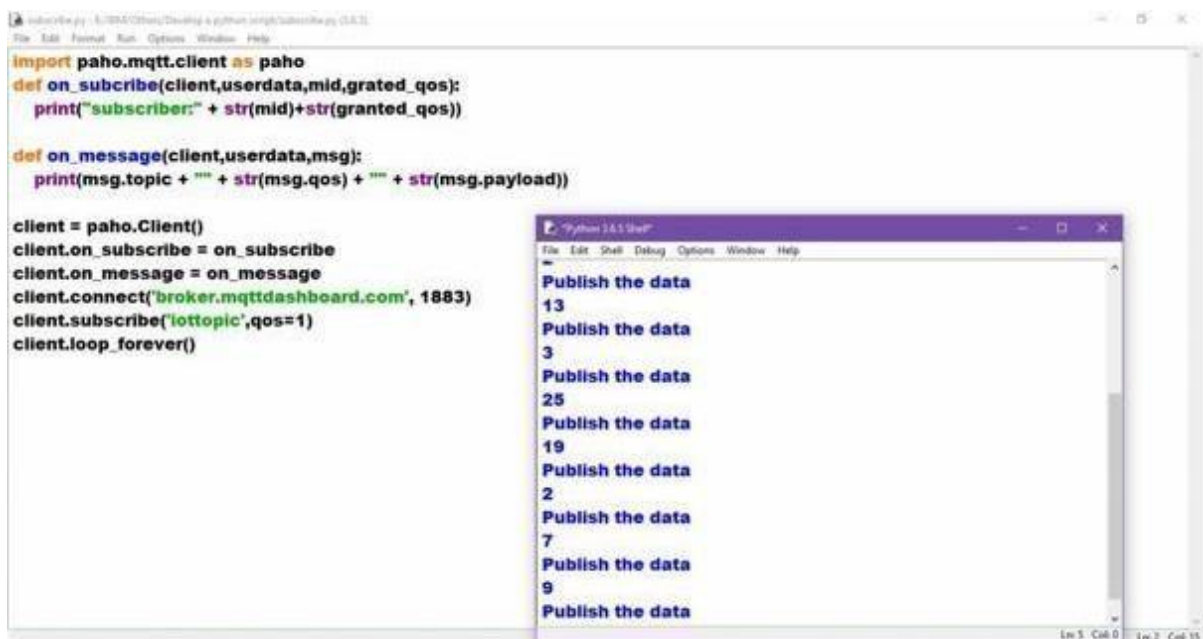
def on_publish(client, userdata, mid):
    print("Publish the data ")

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)
```

Overlaid on the IDE is a 'Python 3.6.5 Shell' window showing the execution output:

```
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 displays a Python IDE with a file named 'subscriber.py'. The code is as follows:

```
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()
```

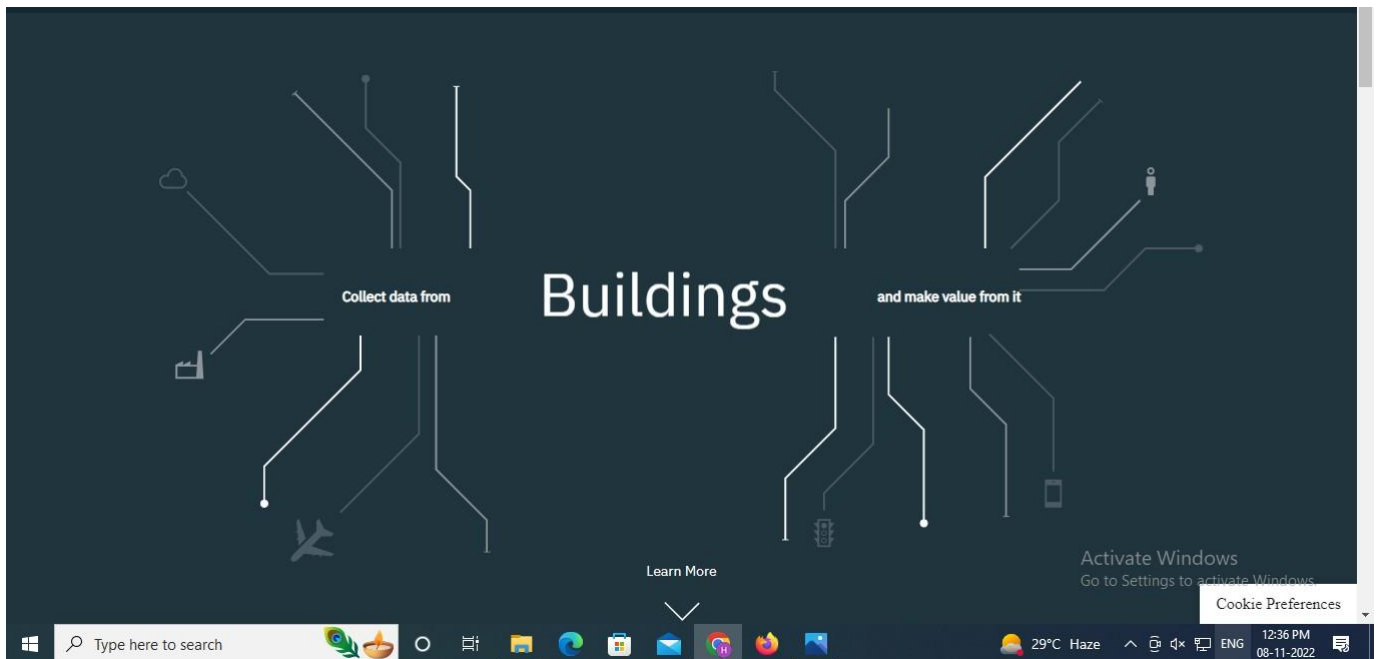
Overlaid on the IDE is a 'Python 3.6.5 Shell' window showing the execution output:

```
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
```

IBM Cloud IoT Platform console showing a device named 'abcd' with status 'Disconnected'. The 'Recent Events' tab is selected, displaying a table of events.

Event	Value	Format	Last Received
event_1	{"randomNumber":74}	json	a few seconds ago
event_1	{"randomNumber":47}	json	a few seconds ago
event_1	{"randomNumber":45}	json	a minute ago
event_1	{"randomNumber":19}	json	a minute ago
event_1	{"randomNumber":79}	json	a minute ago

1 Simulation running



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
IoTPlatform: %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()
```