

DEVELOP A PYTHON SCRIPT TO PUBLISH AND SUBSCRIBE TO IBM IOT PLATFORM

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Team ID	PNT2022TMID45187
Project Name	SMARTFARMER – IoT ENABLED SMART FARMING APPLICATION

PROGRAM :

```
import wiotp.sdk.device
import time
import os
import datetime
import random
myConfig = {
    "identity": {
        "orgId": "mlgc9d",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myConfig,
logHandlers=None)
client.connect ()

def myCommandCallback (cmd) :
    print ("Message received from IBM IoT Platform: %s"
%cmd.data['command'])
    m=cmd.data['command']
    if (m=="motoron"):
        print ("Motor is switched on")
    elif (m=="motoroff"):
        print ("Motor is switched OFF")
    print (" ")
```

while True:

```
    soil=random.randint (0,100)
```

```
    temp=random.randint (-20, 125)
```

```
    hum=random.randint (0, 100)
```

```
    myData={'soil moisture': soil, 'temperature':temp,  
'humidity':hum}
```

```
    client.publishEvent (eventId="status",
```

```
msgFormat="json",
```

```
    data=myData, qos=0 , onPublish=None)
```

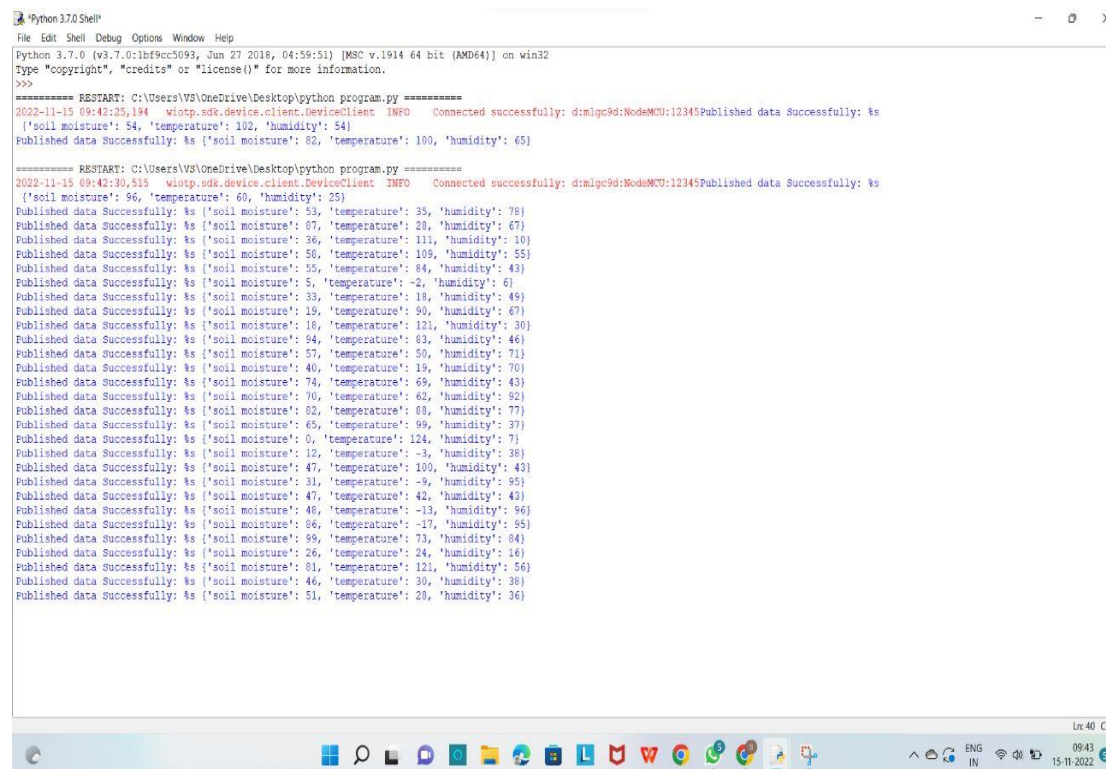
```
    print ("Published data Successfully: %s", myData)
```

```
    time.sleep (2)
```

```
    client.commandCallback = myCommandCallback
```

```
client.disconnect ()
```

OUTPUT:



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\VS\OneDrive\Desktop\python program.py =====
2022-11-15 09:42:25,194  wiotp.sdk.device.client.DeviceClient INFO  Connected successfully: dmlgc9d:NodeMCU:12345Published data Successfully: {'soil moisture': 54, 'temperature': 102, 'humidity': 54}
Published data Successfully: {'soil moisture': 82, 'temperature': 100, 'humidity': 65}

===== RESTART: C:\Users\VS\OneDrive\Desktop\python program.py =====
2022-11-15 09:42:30,515  wiotp.sdk.device.client.DeviceClient INFO  Connected successfully: dmlgc9d:NodeMCU:12345Published data Successfully: {'soil moisture': 96, 'temperature': 60, 'humidity': 25}
Published data Successfully: {'soil moisture': 53, 'temperature': 35, 'humidity': 78}
Published data Successfully: {'soil moisture': 87, 'temperature': 28, 'humidity': 67}
Published data Successfully: {'soil moisture': 36, 'temperature': 111, 'humidity': 10}
Published data Successfully: {'soil moisture': 56, 'temperature': 109, 'humidity': 55}
Published data Successfully: {'soil moisture': 55, 'temperature': 84, 'humidity': 43}
Published data Successfully: {'soil moisture': 5, 'temperature': -2, 'humidity': 6}
Published data Successfully: {'soil moisture': 33, 'temperature': 18, 'humidity': 49}
Published data Successfully: {'soil moisture': 19, 'temperature': 90, 'humidity': 67}
Published data Successfully: {'soil moisture': 18, 'temperature': 121, 'humidity': 30}
Published data Successfully: {'soil moisture': 94, 'temperature': 83, 'humidity': 46}
Published data Successfully: {'soil moisture': 57, 'temperature': 50, 'humidity': 71}
Published data Successfully: {'soil moisture': 40, 'temperature': 19, 'humidity': 70}
Published data Successfully: {'soil moisture': 74, 'temperature': 69, 'humidity': 43}
Published data Successfully: {'soil moisture': 70, 'temperature': 62, 'humidity': 92}
Published data Successfully: {'soil moisture': 82, 'temperature': 88, 'humidity': 77}
Published data Successfully: {'soil moisture': 65, 'temperature': 99, 'humidity': 37}
Published data Successfully: {'soil moisture': 0, 'temperature': 124, 'humidity': 7}
Published data Successfully: {'soil moisture': 12, 'temperature': -3, 'humidity': 38}
Published data Successfully: {'soil moisture': 47, 'temperature': 100, 'humidity': 43}
Published data Successfully: {'soil moisture': 31, 'temperature': -9, 'humidity': 95}
Published data Successfully: {'soil moisture': 47, 'temperature': 42, 'humidity': 43}
Published data Successfully: {'soil moisture': 46, 'temperature': -13, 'humidity': 96}
Published data Successfully: {'soil moisture': 86, 'temperature': -17, 'humidity': 95}
Published data Successfully: {'soil moisture': 99, 'temperature': 73, 'humidity': 84}
Published data Successfully: {'soil moisture': 26, 'temperature': 24, 'humidity': 16}
Published data Successfully: {'soil moisture': 81, 'temperature': 121, 'humidity': 56}
Published data Successfully: {'soil moisture': 46, 'temperature': 30, 'humidity': 38}
Published data Successfully: {'soil moisture': 51, 'temperature': 28, 'humidity': 36}
```