

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

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<b>Project Name</b>	Smart Farmer - IoT Enabled Smart Farming Application

**Step 1: Python Program**

```
import wiotp.sdk.device
import time
import os
import datetime
import random
myconfig = {
    "identity": {
        "orgId": "ga4sjl",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "CK2!+2FzgnyZFWE9yW"
    }
}
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={'soilmoisture':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)

```

## OUTPUT:



```

File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import os
import datetime
import random
myconfig = {
    "identity": {
        "orgId": "ga4sajl",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "CK2!+2FzqnyZFWE9y6"
    }
}
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.myCommandCallback = myCommandCallback
client.disconnect()

```

Ln: 13 Col: 36

```
*IDLE Shell 3.8.10*
File Edit Shell Debug Options Window Help
Published data Successfully: %s ('soil_moisture': 74, 'temperature': 29, 'humidity': 98)
Published data Successfully: %s ('soil_moisture': 36, 'temperature': 7, 'humidity': 69)
Published data Successfully: %s ('soil_moisture': 20, 'temperature': 77, 'humidity': 56)
Published data Successfully: %s ('soil_moisture': 72, 'temperature': 103, 'humidity': 59)
Published data Successfully: %s ('soil_moisture': 77, 'temperature': -12, 'humidity': 12)
Published data Successfully: %s ('soil_moisture': 49, 'temperature': 46, 'humidity': 34)
Published data Successfully: %s ('soil_moisture': 13, 'temperature': 102, 'humidity': 29)
Published data Successfully: %s ('soil_moisture': 33, 'temperature': 12, 'humidity': 32)
Published data Successfully: %s ('soil_moisture': 47, 'temperature': 101, 'humidity': 86)
Published data Successfully: %s ('soil_moisture': 2, 'temperature': 94, 'humidity': 26)
Published data Successfully: %s ('soil_moisture': 61, 'temperature': 61, 'humidity': 73)
Published data Successfully: %s ('soil_moisture': 69, 'temperature': 16, 'humidity': 97)
Published data Successfully: %s ('soil_moisture': 96, 'temperature': 107, 'humidity': 20)
Published data Successfully: %s ('soil_moisture': 8, 'temperature': 84, 'humidity': 30)
Published data Successfully: %s ('soil_moisture': 77, 'temperature': 91, 'humidity': 99)
Published data Successfully: %s ('soil_moisture': 13, 'temperature': 78, 'humidity': 29)
Published data Successfully: %s ('soil_moisture': 0, 'temperature': 75, 'humidity': 26)
Published data Successfully: %s ('soil_moisture': 6, 'temperature': 105, 'humidity': 22)
Published data Successfully: %s ('soil_moisture': 72, 'temperature': 49, 'humidity': 16)
Published data Successfully: %s ('soil_moisture': 4, 'temperature': 113, 'humidity': 94)
Published data Successfully: %s ('soil_moisture': 14, 'temperature': 84, 'humidity': 82)
Published data Successfully: %s ('soil_moisture': 72, 'temperature': 20, 'humidity': 65)
Published data Successfully: %s ('soil_moisture': 73, 'temperature': 111, 'humidity': 58)
Published data Successfully: %s ('soil_moisture': 58, 'temperature': 97, 'humidity': 50)
Published data Successfully: %s ('soil_moisture': 48, 'temperature': -5, 'humidity': 62)
Published data Successfully: %s ('soil_moisture': 91, 'temperature': 107, 'humidity': 22)
Published data Successfully: %s ('soil_moisture': 39, 'temperature': 13, 'humidity': 83)
Published data Successfully: %s ('soil_moisture': 76, 'temperature': 38, 'humidity': 53)
Published data Successfully: %s ('soil_moisture': 43, 'temperature': 19, 'humidity': 17)
Published data Successfully: %s ('soil_moisture': 80, 'temperature': 118, 'humidity': 66)
Published data Successfully: %s ('soil_moisture': 93, 'temperature': -2, 'humidity': 6)
Published data Successfully: %s ('soil_moisture': 71, 'temperature': 19, 'humidity': 62)
Published data Successfully: %s ('soil_moisture': 45, 'temperature': 59, 'humidity': 84)
Published data Successfully: %s ('soil_moisture': 52, 'temperature': 101, 'humidity': 12)
Published data Successfully: %s ('soil_moisture': 33, 'temperature': 24, 'humidity': 74)
Published data Successfully: %s ('soil_moisture': 16, 'temperature': 11, 'humidity': 0)
Published data Successfully: %s ('soil_moisture': 93, 'temperature': 93, 'humidity': 59)
Published data Successfully: %s ('soil_moisture': 96, 'temperature': 96, 'humidity': 67)
Published data Successfully: %s ('soil_moisture': 33, 'temperature': 33, 'humidity': 52)
Published data Successfully: %s ('soil_moisture': 30, 'temperature': 73, 'humidity': 75)
Lnc 5 Col 0
```

**Step3:** Go To IBM WATSON IOT Platform, Under The Devices See the Status of Output

← Back

Device Drilldown - 12345

Recent Events

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

Event	Value	Format	Last Received
State			
status	("temperature":108,"humidity":75,"soilmoisture"...	json	a few seconds ago
Device Information			
status	("temperature":-5,"humidity":27,"soilmoisture"...	json	a few seconds ago
Metadata			
status	("temperature":1,"humidity":29,"soilmoisture":57)	json	a few seconds ago
Diagnostics			
status	("temperature":115,"humidity":89,"soilmoisture"...	json	a few seconds ago
Connection Logs			
status	("temperature":119,"humidity":45,"soilmoisture"...	json	a few seconds ago
Device Actions			

State

This table shows a list of data points that are reported by this device.

Showing Raw Data | No Interfaces Available