

# DEVELOP A PYTHON SCRIPT

Date	12 September 2022
Team ID	PNT2022TMID41966
Project Name	IOT Based Smart Crop Protection For Agriculture
Maximum Marks	4 Marks

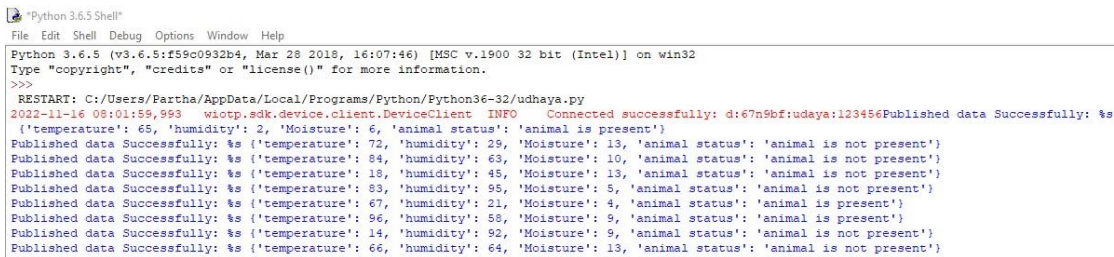
Python Code :

```
import wiotp.sdk.device
import time
import random
myConfig={
    "identity": {
        "orgId": "67n9bf",
        "typeId": "udaya",
        "deviceId": "123456"},
    "auth": {
        "token": "622519106052"
    }
}
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(" ")
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    moist=random.randint(0,14)
    animal=random.randint(0,1)
    if(animal>0.5):
        an="animal is present"
    else:
        an="animal is not present"
    myData={'temperature':temp, 'humidity':hum, 'Moisture':moist,"animal status":an}
    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()
```

## program:

```
import wiotp.sdk.device
import time
import random
myConfig={
    "identity": {
        "orgId": "67n9bf",
        "typeId": "udhaya",
        "deviceId":"123456"},
    "auth": {
        "token": "622519106052"
    }
}
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(" ")
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
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    myData={'temperature':temp, 'humidity':hum, 'Moisture':moist,"animal status":an}
    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()
```

## OUTPUT:



```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/Partha/AppData/Local/Programs/Python/Python36-32/udhaya.py
2022-11-16 08:01:55,993 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:67n9bf:udaya:123456Published data Successfully: %s
{'temperature': 65, 'humidity': 2, 'Moisture': 6, 'animal status': 'animal is present'}
Published data Successfully: %s {'temperature': 72, 'humidity': 29, 'Moisture': 13, 'animal status': 'animal is not present'}
Published data Successfully: %s {'temperature': 84, 'humidity': 63, 'Moisture': 10, 'animal status': 'animal is not present'}
Published data Successfully: %s {'temperature': 18, 'humidity': 45, 'Moisture': 13, 'animal status': 'animal is not present'}
Published data Successfully: %s {'temperature': 83, 'humidity': 95, 'Moisture': 5, 'animal status': 'animal is not present'}
Published data Successfully: %s {'temperature': 67, 'humidity': 21, 'Moisture': 4, 'animal status': 'animal is present'}
Published data Successfully: %s {'temperature': 96, 'humidity': 58, 'Moisture': 9, 'animal status': 'animal is present'}
Published data Successfully: %s {'temperature': 14, 'humidity': 92, 'Moisture': 9, 'animal status': 'animal is not present'}
Published data Successfully: %s {'temperature': 66, 'humidity': 64, 'Moisture': 13, 'animal status': 'animal is not present'}
```

Starting page x IBM x IBM Cloud x py - 622519106052@selvam: x

https://67n9bf.internetofthings.ibmcloud.com/dashboard/devices/browse

Apps DriverPack Internet Start Driver News

IBM Watson IoT Platform

622519106052@smartinternz.com  
ID: 67n9bf

?

Add Device +

Browse Action Device Types Interfaces

Device ID Status Device Type Class ID Date Added

123456 Connected udaya Device Nov 16, 2022 7:39 AM

Identity Device Information Recent Events State Logs

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

Event	Value	Format	Last Received
status	{"temperature":8,"humidity":92,"Moisture":13,"a...	json	a few seconds ago
status	{"temperature":117,"humidity":39,"Moisture":0,"...	json	a few seconds ago
status	{"temperature":2,"humidity":52,"Moisture":6,"an...	json	a few seconds ago
status	{"temperature":74,"humidity":59,"Moisture":4,"a...	json	a few seconds ago
status	{"temperature":108,"humidity":23,"Moisture":4,"...	json	a few seconds ago

The screenshot shows the IBM Watson IoT Platform interface. At the top, there's a navigation bar with the IBM logo and the text 'IBM Watson IoT Platform'. Below this is a breadcrumb trail: 'Starting page' > 'IBM Cloud' > 'py - 622519106052@selvamti...' > 'https://67n9bf.internetofthings.ibmcloud.com/dashboard/devices/browse'. The main header area includes the text 'IBM Watson IoT Platform' and a user profile icon with the email '622519106052@smartinternz.com' and ID '67n9bf'. A sidebar on the left contains icons for 'Browse', 'Action', 'Device Types', and 'Interfaces'. The main content area shows a table of devices. The first device, ID '123456', is in a 'Connected' state. Below the device name, there's a section titled 'Showing Raw Data | No Interfaces Available' which contains a table of device properties. The properties table has columns: Property, Value, Type, Event, and Last Received. The data rows are: temperature (124, Number, status, a few seconds ago), humidity (62, Number, status, a few seconds ago), moisture (6, Number, status, a few seconds ago), and animal status (animal is not present, String, status, a few seconds ago). The temperature and humidity values are highlighted in red.

Property	Value	Type	Event	Last Received
temperature	124	Number	status	a few seconds ago
humidity	62	Number	status	a few seconds ago
Moisture	6	Number	status	a few seconds ago
animal status	animal is not present	String	status	a few seconds ago