DEVELOP A PYTHON SCRIPT

TO PUBLISH AND SUBSCRIBE TO IBM PLATFORM

Date	12 Oct 2022
Team ID	PNT2022TMID262558
Project Name	Project -Smart farmer-IOT enabled smart Farming Application

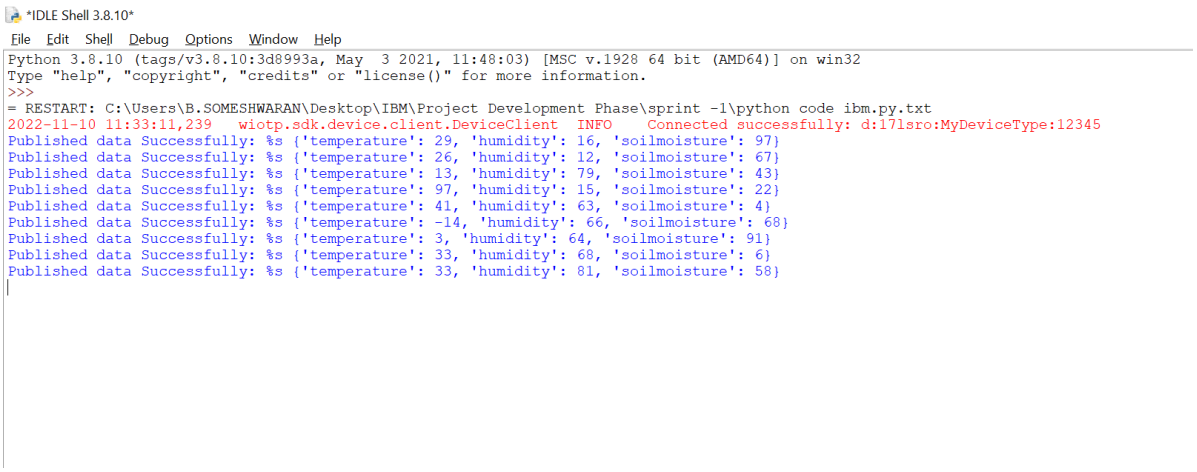
Step:1 Python Program

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random

ms=0
status='light off'
myConfig = {
    "identity": {
        "orgId": "17lsro",
        "typeId": "MyDeviceType",
        "deviceId":"12345"
    },
    "auth": {
        "token": "GkatKdiUS?UVHKvnAD"
    }
}

def myCommandCallback(cmd):
```

```
    print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
    m=cmd.data['command']
    if(m=="MOTOR ON"):
        print("MOTOR  IS ON")
        status='motor on'
        myData={'temperature':temp,
'humidity':hum,'soilmoisture':sm_percentage,'status':status}
        client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
        print("Published data Successfully: %s", myData)


        time.sleep(2)


    elif(m=="MOTOR OFF"):
        print("MOTOR IS OFF")
        status='motor off'
        myData={'temperature':temp,
'humidity':hum,'soilmoisture':sm_percentage,'status':status}
        client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
        print("Published data Successfully: %s", myData)


        time.sleep(2)



client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
```

```
while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    soilmoisture=random.randint(0,1023)#analog sensor
    sm_percentage=(soilmoisture/1023)*100
    sm_percentage=int(sm_percentage)
    myData={'temperature':temp,      'humidity':hum,'soilmoisture':sm_percentage}
    client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)


time.sleep(2)
client.disconnect()
```

Step:2 Run the Program



Step:3 Go To IBM WATSON IOT Platform, Under The Devices See the Status of Output