

Develop a python script to publish and subscribe to IBM IoT platform

Project Title	Smart Farmer - IOT enabled smart farming application
Team Id	PNT2022TMID16510

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
organization = "olwipo"
deviceType = "abcd"
deviceId = "12345"
authMethod = "token"
authToken = "12345678"
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    m=cmd.data['command']
    if (m=="motoron"):
        print ("motor is switched on")
    elif (m=="motoroff"):
        print ("motor is switched off")
    else :
        print ("please send proper command")

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId,
"auth-method": authMethod, "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    #.....

except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()
    deviceCli.connect()

while True:
    moist=random.randint(0,100)
    temp=random.randint(-20,125)
```

```
Humid=random.randint(0,100)
data = { 'moist' : moist , 'temp' : temp , 'Humid': Humid}
def myOnPublishCallback():
    print ("Published moist = %s C" % moist, "temp= %s %" % temp,
"Humid = %s %" % Humid, "to IBM Watson")

    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTSensor")
        time.sleep(10)

    deviceCli.commandCallback = myCommandCallback
deviceCli.disconnect()
```