

DEVELOP A PYTHON SCRIPT TO PUBLISH AND SUBSRIBE TO IBM IOT PLATFORM:

Team ID	PNT2022TMID53630
Project name	Smart Farmer - IoT Enabled Smart Farming Application

CODE:

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "w79t1i"
deviceType = "SmartFarmer_RevillaJyosthna"
deviceId = "93456"
authMethod = "token"
authToken = "jyosthna12345"

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
```

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print(cmd)
status=cmd.data['command']
if status=="motoron":
    print("Motor is on")
else:
    print("Motor is off")

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()

# Connect and send a datapoint "hello" with value "world" into the cloud as an
event of type "greeting" 10 times
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11
    temperature=random.randint(18,80)
    humidity=random.randint(20,100)
    soilmoisture=random.randint(0,100)

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data = {"d":{ 'temperature':temperature,'humidity':humidity,
'soilmoisture':soilmoisture} }

#print data

def myOnPublishCallback():

    print ("Published Temperature = %s C" % temperature, "Humidity = %s
%% " %humidity, "to IBM Watson")


    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)

    if not success:

        print("Not connected to IoT")

        time.sleep(1)


    deviceCli.commandCallback = myCommandCallback


# Disconnect the device and application from the cloud
deviceCli.disconnect()
```