

CODE PYTHON TO PUBLISH AND SUBSCRIBE IBM IOT

Team ID	PNT2022TMID46860
Project Name	Smart Farmer-IOT Enable smart Farming Application

PYTHON CODE:

```
python to iot.py - C:\Users\ELCOT\AppData\Local\Programs\Python\Python37\python to iot.py (3.7.0)
File Edit Format Run Options Window Help

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

|
#Provide your IBM Watson Device Credentials
organization = 'j3bgcj'
deviceType = 'nodeMCU'
deviceId = '1234'
authMethod = 'token'
authToken = '12345678'

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data[command])
    status=cmd.data[command]
    if status=="lighton":
        print("led is on")
    else:
        print("led is off")

    #print(cmd)

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

Ln: 7 Col: 0
```

OUTPUT:

```
*Python 3.7.0 Shell*
File Edit Shell Debug Options Window Help

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\ELCOT\AppData\Local\Programs\Python\Python37\python to iot.py
2022-11-16 16:58:54.237 ibmiotf.device.Client INFO Connected successfully: dj3bgcjnodeMCU:1234
Published Temperature = 0 C Humidity = 22 % to IBM Watson
Published Temperature = 38 C Humidity = 92 % to IBM Watson
Published Temperature = 98 C Humidity = 53 % to IBM Watson
Published Temperature = 90 C Humidity = 60 % to IBM Watson
Published Temperature = 25 C

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```

IBM IOT WATSON PLATFORM:

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for Browse, Action, Device Types, and Interfaces. A search bar is present with the text "Search by Device ID". Below the search bar is a table listing devices. The table has columns for Device ID, Status, Device Type, Class ID, and Date Added. The first device is 1234, which is Connected. The other three devices are Disconnected. The table is paginated, showing 1 of 1 page.

Device ID	Status	Device Type	Class ID	Date Added
1234	Connected	nodeMCU	Device	Nov 13, 2022 2:00 PM
123456_1	Disconnected	123456	Device	Nov 16, 2022 1:50 PM
abcde	Disconnected	12345	Device	Nov 14, 2022 12:40 PM
node	Disconnected	123456	Device	Nov 14, 2022 2:58 PM

The screenshot shows the IBM Watson IoT Platform dashboard with the details of a specific device (ID: 1234) selected. The device is Connected. The details view shows the device's identity, device information, recent events, state, and logs. The recent events section displays a live stream of data from the device, showing temperature and humidity readings in JSON format.

Event	Value	Format	Last Received
IoTSensor	["temp":35,"Humid":35]	json	a few seconds ago
IoTSensor	["temp":66,"Humid":19]	json	a few seconds ago
IoTSensor	["temp":62,"Humid":86]	json	a few seconds ago
IoTSensor	["temp":28,"Humid":13]	json	a few seconds ago
IoTSensor	["temp":39,"Humid":79]	json	a few seconds ago

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j3bgcj.internetofthings.ibmcloud.com/dashboard/boards/785a2b08-66c0-4e20-9137-936a674e33d0

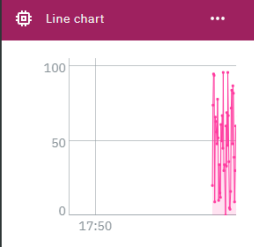
IBM Watson IoT Platform

karthickraj1206@gmail.com
ID: j3bgcj

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+ Add New Card Settings

Line chart



17:50

Project & Sprint....docx Project & Sprint Pl....pdf Prepare Mileston....docx Show all x

Type here to search

17:54
16-11-2022