

DEVELOP A PYTHON SCRIPT TO PUBLISH AND SUBSCRIBE TO IBM IOT PLATFORM

Team ID	PNT2022TMID35909
Project Name	GAS LEAKAGE MONITORING AND ALERTING SYSTEMS FOR INDUSTRIES

PYTHON CODE:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random


#Provide your IBM Watson Device Credentials
organization = "ckdbr5"
deviceType = "123"
deviceId = "252725"
authMethod = "token"
authToken = "27252527"
```

```
# 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)
```

```
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

    temp=random.randint(92,110)
    Humid=random.randint(60,100)

    data = { 'temp' : temp, 'Humid': Humid }
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %% "
% Humid, "to IBM Watson")

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

    deviceCli.commandCallback = myCommandCallback

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

OUTPUT:

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (tags/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\JANANI\Downloads\ibmiotpublishsubscribe.py =====
2022-11-18 19:48:48,486 ibmiotf.device.Client INFO Connected successfully: d:ckdbr5:123:252725
Published Temperature = 96 C Humidity = 71 % to IBM Watson
Published Temperature = 108 C Humidity = 97 % to IBM Watson
Published Temperature = 95 C Humidity = 83 % to IBM Watson
Published Temperature = 105 C Humidity = 80 % to IBM Watson
Published Temperature = 109 C Humidity = 78 % to IBM Watson
Published Temperature = 101 C Humidity = 77 % to IBM Watson
Published Temperature = 105 C Humidity = 66 % to IBM Watson
Published Temperature = 97 C Humidity = 78 % to IBM Watson
|
```

PUBLISH DATA TO THE IBM CLOUD

IBM Watson IoT Platform

2019504576@student.annauniv.edu
ID: ckdb5

Browse

Action

Device Types

Interfaces

Add Device

252725

Disconnected

123

Device

Oct 6, 2022 10:31 PM

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
IoTSensor	{"temp":101,"Humid":75}	json	a few seconds ago
IoTSensor	{"temp":105,"Humid":99}	json	a few seconds ago
IoTSensor	{"temp":97,"Humid":78}	json	a few seconds ago
IoTSensor	{"temp":105,"Humid":66}	json	a few seconds ago
IoTSensor	{"temp":101,"Humid":77}	json	a few seconds ago