

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

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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")

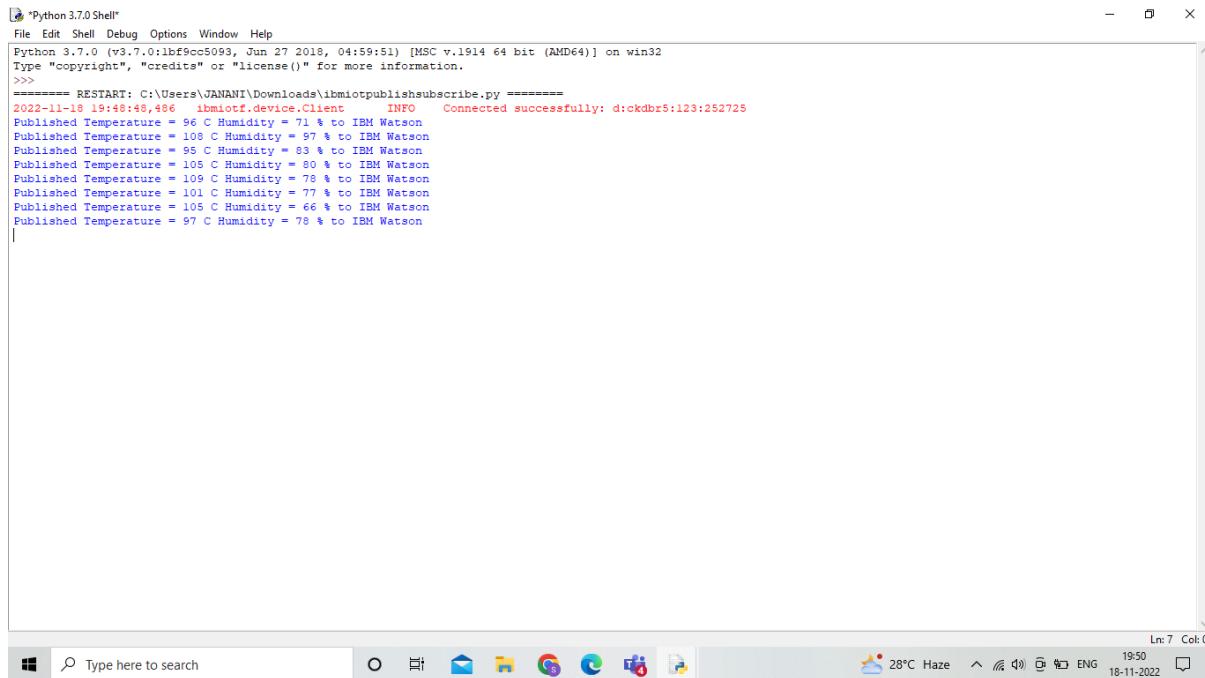
        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)

        if not success:
            print("Not connected to IoTF")
            time.sleep(10)

    deviceCli.commandCallback = myCommandCallback

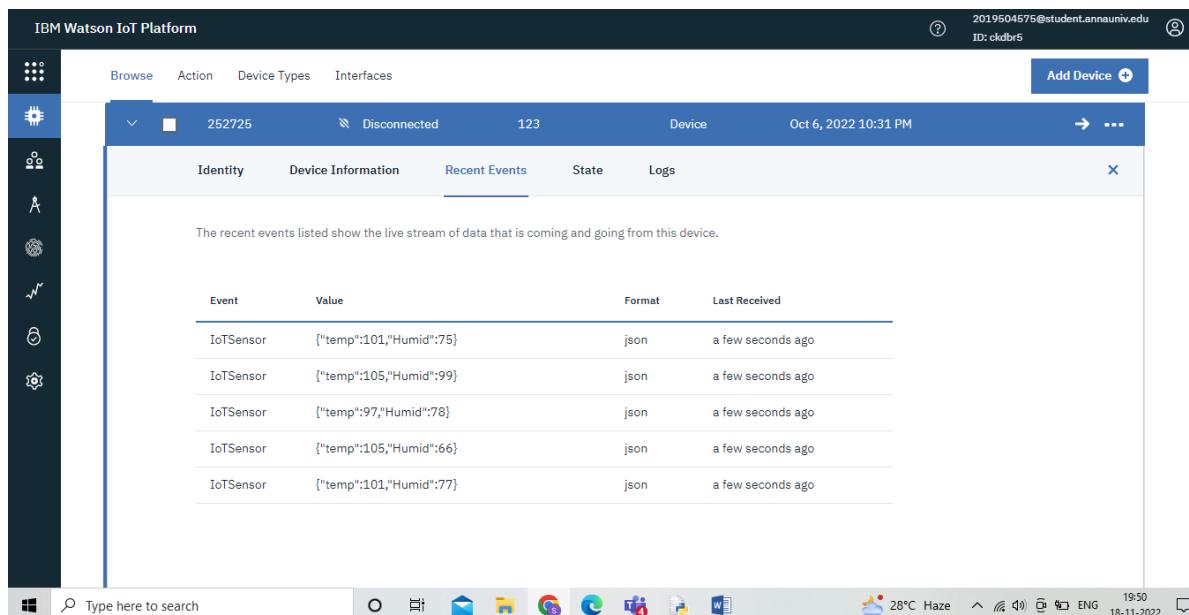
    # Disconnect the device and application from the cloud
    deviceCli.disconnect()
```

OUTPUT:



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:ibf8cc5093, 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



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