

PYTHON CODE FOR GAS TEMPERATURE AND HUMIDITY

Date	16st November 2022
Team ID	PNT2022TMID45387
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Mark	4 marks

TEAM LEADER: ABDUL AZIZ M

TEAM MEMBER 1: KARTHICK PANDIYAN R

TEAM MEMBER 2: JEGAN J

TEAM MEMBER 3: AYYANAR S

PYTHON CODE:

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

#Provide your IBM Watson Device Credentials
organization = "5py6q9"
deviceType = "Weather_now"
deviceId = "Weather1234"
authMethod = "token"
authToken = "XeJFia7_@@t9@@eq_?"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
```

```

        print ("led is on")
    elif status == "lightoff":
        print ("led is 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()

# 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(90,110)
    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 IoT")

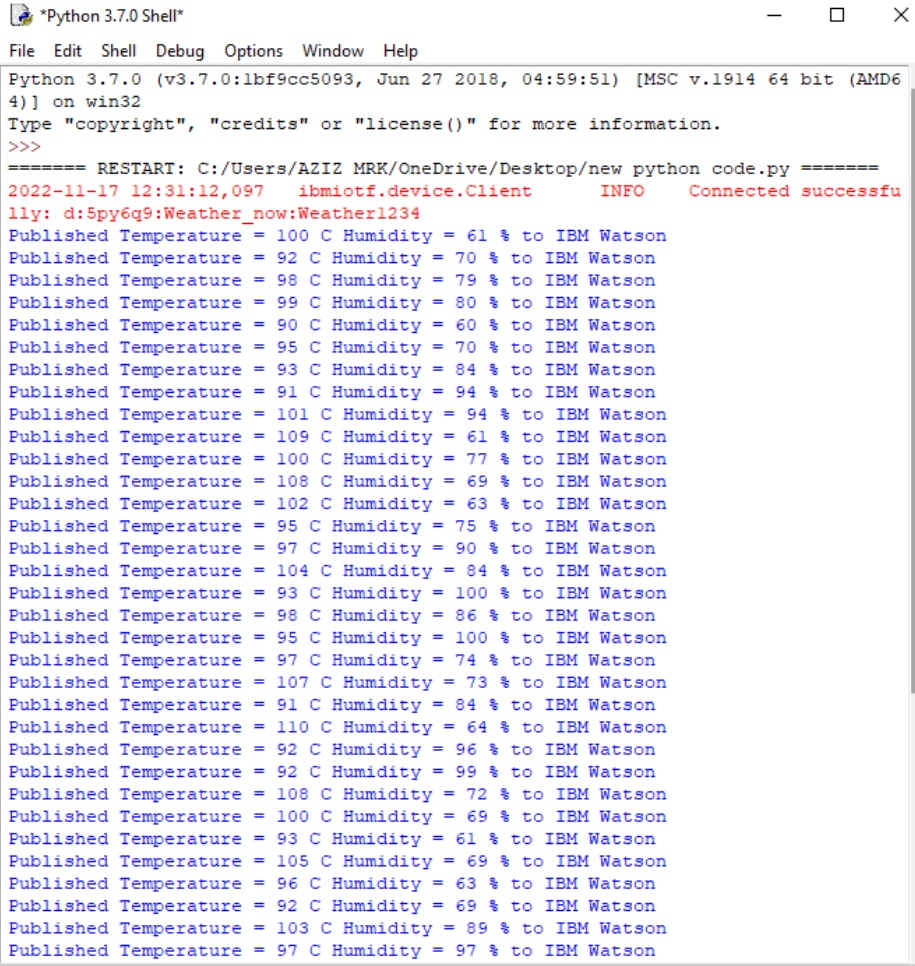
            time.sleep(10)

        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 (v3.7.0:1bf9cc5093, 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/AZIZ MRK/OneDrive/Desktop/new python code.py =====
2022-11-17 12:31:12,097 ibmiotf.device.Client INFO Connected successfully: d:Spy6q9:Weather_now:Weather1234
Published Temperature = 100 C Humidity = 61 % to IBM Watson
Published Temperature = 92 C Humidity = 70 % to IBM Watson
Published Temperature = 98 C Humidity = 79 % to IBM Watson
Published Temperature = 99 C Humidity = 80 % to IBM Watson
Published Temperature = 90 C Humidity = 60 % to IBM Watson
Published Temperature = 95 C Humidity = 70 % to IBM Watson
Published Temperature = 93 C Humidity = 84 % to IBM Watson
Published Temperature = 91 C Humidity = 94 % to IBM Watson
Published Temperature = 101 C Humidity = 94 % to IBM Watson
Published Temperature = 109 C Humidity = 61 % to IBM Watson
Published Temperature = 100 C Humidity = 77 % to IBM Watson
Published Temperature = 108 C Humidity = 69 % to IBM Watson
Published Temperature = 102 C Humidity = 63 % to IBM Watson
Published Temperature = 95 C Humidity = 75 % to IBM Watson
Published Temperature = 97 C Humidity = 90 % to IBM Watson
Published Temperature = 104 C Humidity = 84 % to IBM Watson
Published Temperature = 93 C Humidity = 100 % to IBM Watson
Published Temperature = 98 C Humidity = 86 % to IBM Watson
Published Temperature = 95 C Humidity = 100 % to IBM Watson
Published Temperature = 97 C Humidity = 74 % to IBM Watson
Published Temperature = 107 C Humidity = 73 % to IBM Watson
Published Temperature = 91 C Humidity = 84 % to IBM Watson
Published Temperature = 110 C Humidity = 64 % to IBM Watson
Published Temperature = 92 C Humidity = 96 % to IBM Watson
Published Temperature = 92 C Humidity = 99 % to IBM Watson
Published Temperature = 108 C Humidity = 72 % to IBM Watson
Published Temperature = 100 C Humidity = 69 % to IBM Watson
Published Temperature = 93 C Humidity = 61 % to IBM Watson
Published Temperature = 105 C Humidity = 69 % to IBM Watson
Published Temperature = 96 C Humidity = 63 % to IBM Watson
Published Temperature = 92 C Humidity = 69 % to IBM Watson
Published Temperature = 103 C Humidity = 89 % to IBM Watson
Published Temperature = 97 C Humidity = 97 % to IBM Watson
Ln: 51 Col: 4

```

IBM Watson IoT Platform

?

abdulazizmrk@gmail.com

ID: 5py6q9

Browse

Action

Device Types

Interfaces

Add Device

Browse Devices

All Devices

Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

	Device ID	Status	Device Type	Class ID
>	Weather1234	Connected	Weather_now	Device
>	trainingid	Disconnected	aziz1606	Device

Items per page 50 | 1–2 of 2 items

Device Type: Weather_now

Events 1

New event type

Event type name

event_1

Send

Schedule

20

Every Minute

Payload

Specify the event payload in the editor window or by uploading a CSV file.

0 {

1 "temperature": random(0, 100)

2 "humidity": random(0, 100)

3 }

4

Upload a CSV file

Cancel

Save

IBM Watson IoT Platform

?

abdulazizmrk@gmail.com

ID: 5py6q9

Browse

Action

Device Types

Interfaces

Add Device

Search by Device ID

Device Simulator

	Device ID	Status	Device Type	Class ID	Date Added	
✓	Weather1234	Connected	Weather_now	Device	17 Nov 2022 12:02	→ ...

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
event_1	{"temperature":42,"humidity":4}	json	a few seconds ago
event_1	{"temperature":70,"humidity":49}	json	a few seconds ago
IoTSensor	{"temp":90,"Humid":74}	json	a few seconds ago
event_1	{"temperature":86,"humidity":9}	json	a few seconds ago
event_1	{"temperature":16,"humidity":71}	json	a few seconds ago

1 Simulation running