PYTHON CODE FOR GAS , TEMPERATURE AND HUMIDITY

Date	16st November 2022
Team ID	PNT2022TMID27029
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Mark	4 marks

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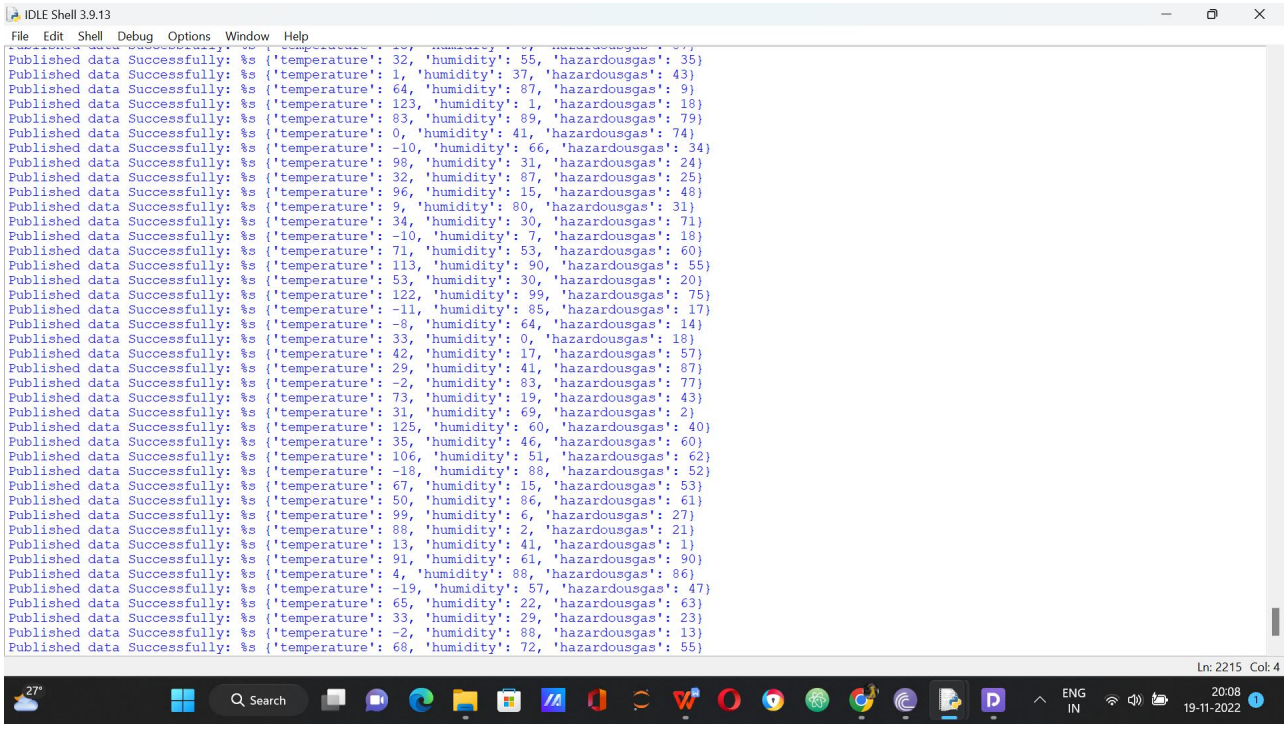
TEAM MEMBER 2:AMALAN BOSCO A
TEAM MEMBER 3: ARISHRAAJ K G

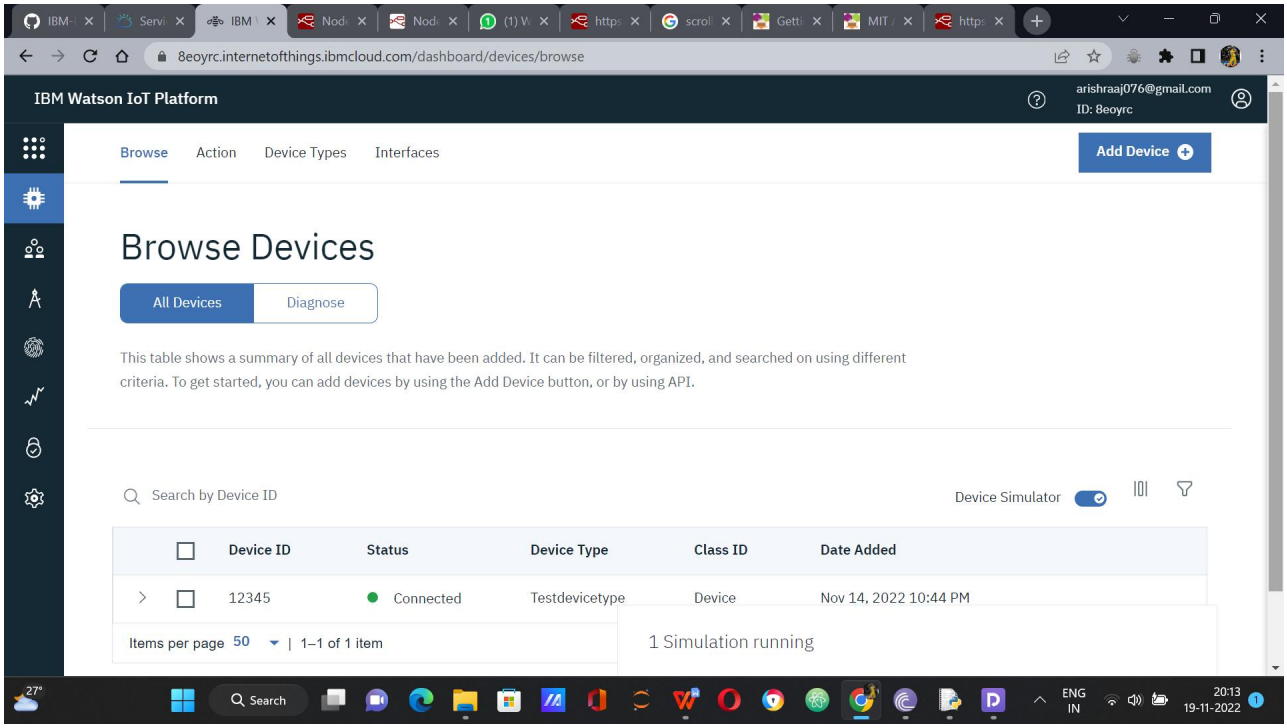
PYTHON CODE:

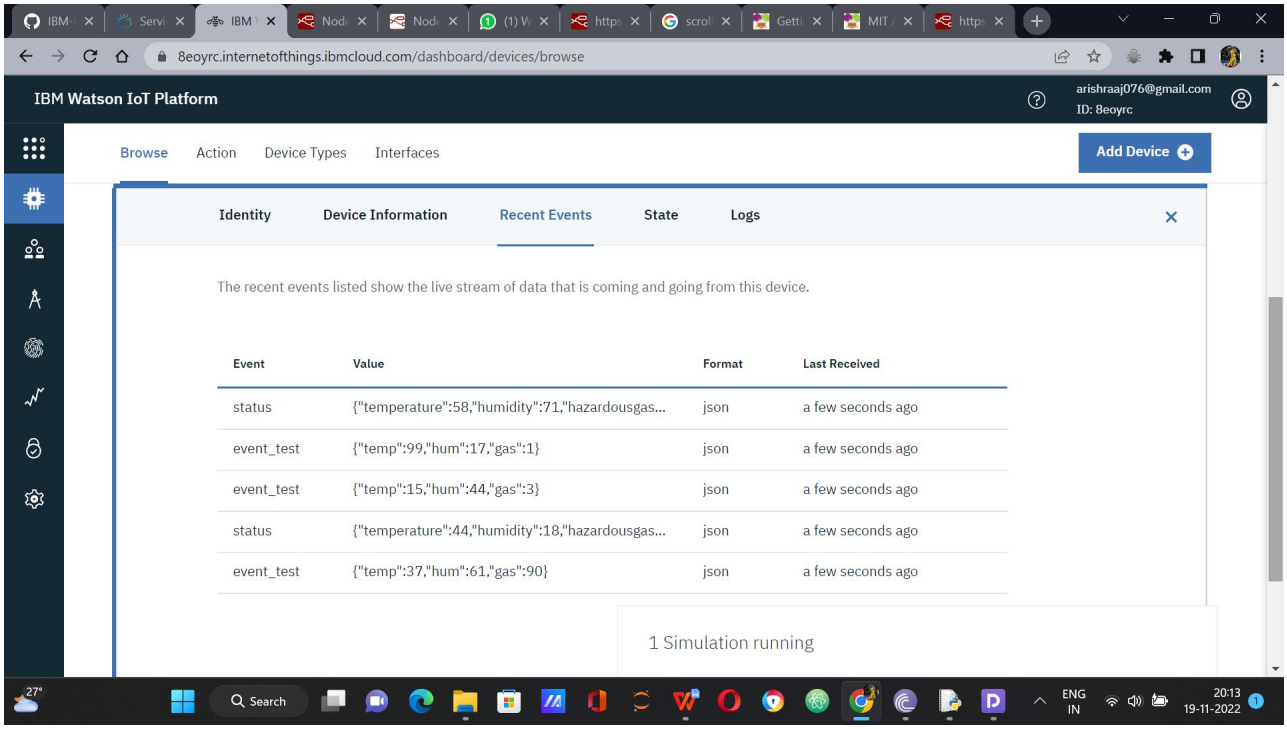
```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgId": "8eoyrc",
        "typeId": "Testdevicetype",
        "deviceId":"12345"
    },
    "auth": {
        "token": "SaoaG_v?EC+&WvCW06"
```

```
 }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']


    if(m=="light on"):
        print("******LIGHTS ON*****")
    else:
        print("*****LIGHTS OFF******")


client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:

    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    gas=random.randint(0,100)

    myData={'temperature':temp, 'humidity':hum,'hazardousgas':gas}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
    print("Published data Successfully: %s", myData)


    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

OUTPUT:


IDLE Shell 3.9.13
File Edit Shell Debug Options Window Help
Published data Successfully: %s {'temperature': 32, 'humidity': 55, 'hazardousgas': 35}
Published data Successfully: %s {'temperature': 1, 'humidity': 37, 'hazardousgas': 43}
Published data Successfully: %s {'temperature': 64, 'humidity': 87, 'hazardousgas': 9}
Published data Successfully: %s {'temperature': 123, 'humidity': 1, 'hazardousgas': 18}
Published data Successfully: %s {'temperature': 83, 'humidity': 89, 'hazardousgas': 79}
Published data Successfully: %s {'temperature': 0, 'humidity': 41, 'hazardousgas': 74}
Published data Successfully: %s {'temperature': -10, 'humidity': 66, 'hazardousgas': 34}
Published data Successfully: %s {'temperature': 98, 'humidity': 31, 'hazardousgas': 24}
Published data Successfully: %s {'temperature': 32, 'humidity': 87, 'hazardousgas': 25}
Published data Successfully: %s {'temperature': 96, 'humidity': 15, 'hazardousgas': 48}
Published data Successfully: %s {'temperature': 9, 'humidity': 80, 'hazardousgas': 31}
Published data Successfully: %s {'temperature': 34, 'humidity': 30, 'hazardousgas': 71}
Published data Successfully: %s {'temperature': -10, 'humidity': 7, 'hazardousgas': 18}
Published data Successfully: %s {'temperature': 71, 'humidity': 53, 'hazardousgas': 60}
Published data Successfully: %s {'temperature': 113, 'humidity': 90, 'hazardousgas': 55}
Published data Successfully: %s {'temperature': 53, 'humidity': 30, 'hazardousgas': 20}
Published data Successfully: %s {'temperature': 122, 'humidity': 99, 'hazardousgas': 75}
Published data Successfully: %s {'temperature': -11, 'humidity': 85, 'hazardousgas': 17}
Published data Successfully: %s {'temperature': -8, 'humidity': 64, 'hazardousgas': 14}
Published data Successfully: %s {'temperature': 33, 'humidity': 0, 'hazardousgas': 18}
Published data Successfully: %s {'temperature': 42, 'humidity': 17, 'hazardousgas': 57}
Published data Successfully: %s {'temperature': 29, 'humidity': 41, 'hazardousgas': 87}
Published data Successfully: %s {'temperature': -2, 'humidity': 83, 'hazardousgas': 77}
Published data Successfully: %s {'temperature': 73, 'humidity': 19, 'hazardousgas': 43}
Published data Successfully: %s {'temperature': 31, 'humidity': 69, 'hazardousgas': 2}
Published data Successfully: %s {'temperature': 125, 'humidity': 60, 'hazardousgas': 40}
Published data Successfully: %s {'temperature': 35, 'humidity': 46, 'hazardousgas': 60}
Published data Successfully: %s {'temperature': 106, 'humidity': 51, 'hazardousgas': 62}
Published data Successfully: %s {'temperature': -18, 'humidity': 88, 'hazardousgas': 52}
Published data Successfully: %s {'temperature': 67, 'humidity': 15, 'hazardousgas': 53}
Published data Successfully: %s {'temperature': 50, 'humidity': 86, 'hazardousgas': 61}
Published data Successfully: %s {'temperature': 99, 'humidity': 6, 'hazardousgas': 27}
Published data Successfully: %s {'temperature': 88, 'humidity': 2, 'hazardousgas': 21}
Published data Successfully: %s {'temperature': 13, 'humidity': 41, 'hazardousgas': 1}
Published data Successfully: %s {'temperature': 91, 'humidity': 61, 'hazardousgas': 90}
Published data Successfully: %s {'temperature': 4, 'humidity': 88, 'hazardousgas': 86}
Published data Successfully: %s {'temperature': -19, 'humidity': 57, 'hazardousgas': 47}
Published data Successfully: %s {'temperature': 65, 'humidity': 22, 'hazardousgas': 63}
Published data Successfully: %s {'temperature': 33, 'humidity': 29, 'hazardousgas': 23}
Published data Successfully: %s {'temperature': -2, 'humidity': 88, 'hazardousgas': 13}
Published data Successfully: %s {'temperature': 68, 'humidity': 72, 'hazardousgas': 55}
Ln: 2215 Col: 4
Search
ENG IN
20:08 19-11-2022


8eoyrc.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
arishraaj076@gmail.com
ID: 8eoyrc
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 Simulator
Device ID
Status
Device Type
Class ID
Date Added
12345
Connected
Testdevicetype
Device
Nov 14, 2022 10:44 PM
Items per page 50
1–1 of 1 item
1 Simulation running
Search
ENG IN
20:13 19-11-2022


8eoyrc.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
arishraaj076@gmail.com
ID: 8eoyrc
Browse
Action
Device Types
Interfaces
Add Device
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
status
{"temperature":58,"humidity":71,"hazardousgas...
json
a few seconds ago
event_test
{"temp":99,"hum":17,"gas":1}
json
a few seconds ago
event_test
{"temp":15,"hum":44,"gas":3}
json
a few seconds ago
status
{"temperature":44,"humidity":18,"hazardousgas...
json
a few seconds ago
event_test
{"temp":37,"hum":61,"gas":90}
json
a few seconds ago
1 Simulation running
Search
ENG
IN
20:13
19-11-2022

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