PYTHON CODE FOR GAS , TEMPERATURE AND HUMIDITY

Date	16st November 2022
Team ID	PNT2022TMID03557
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Mark	4 marks

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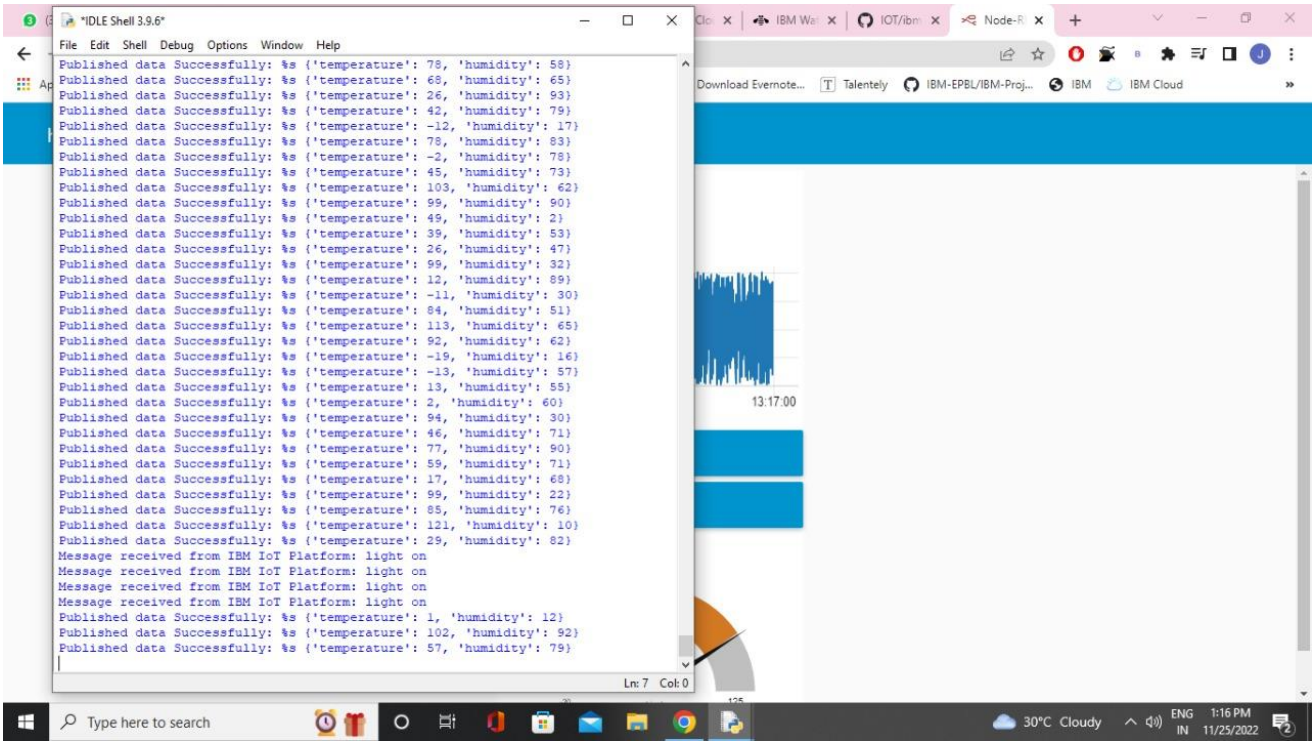
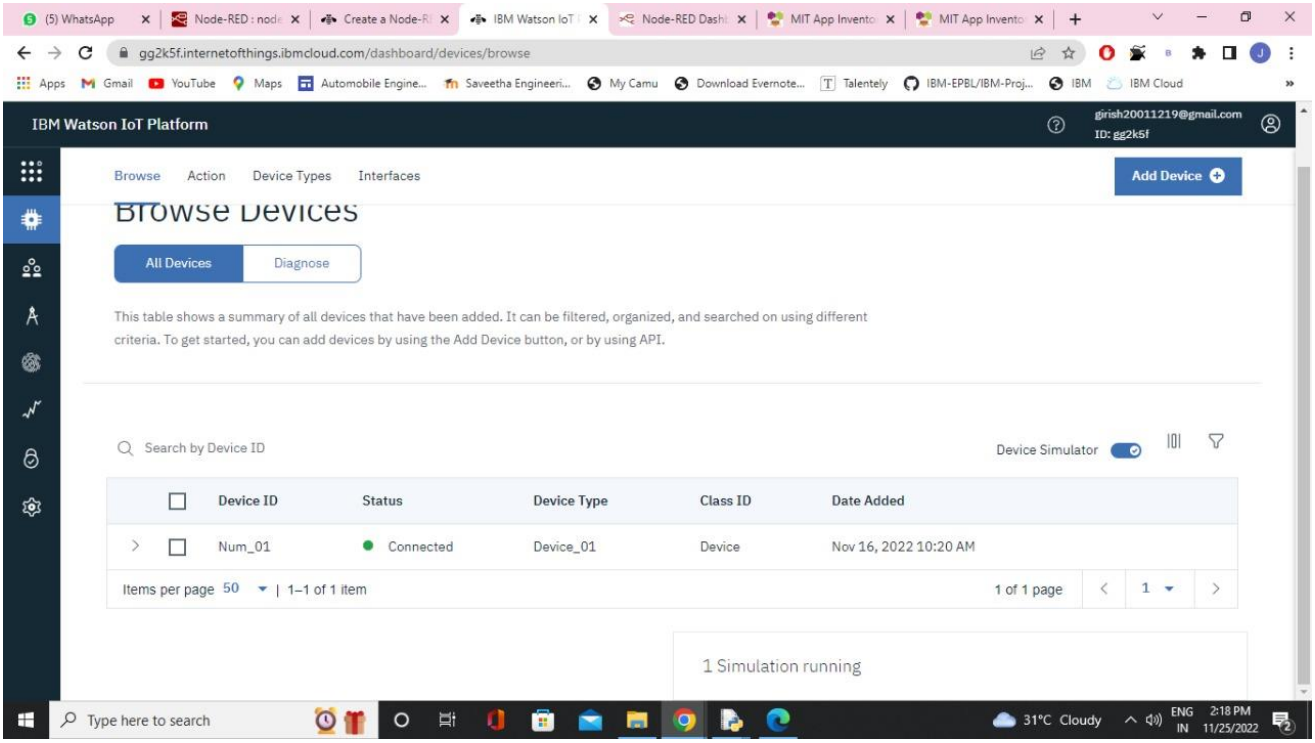
PYTHON CODE:

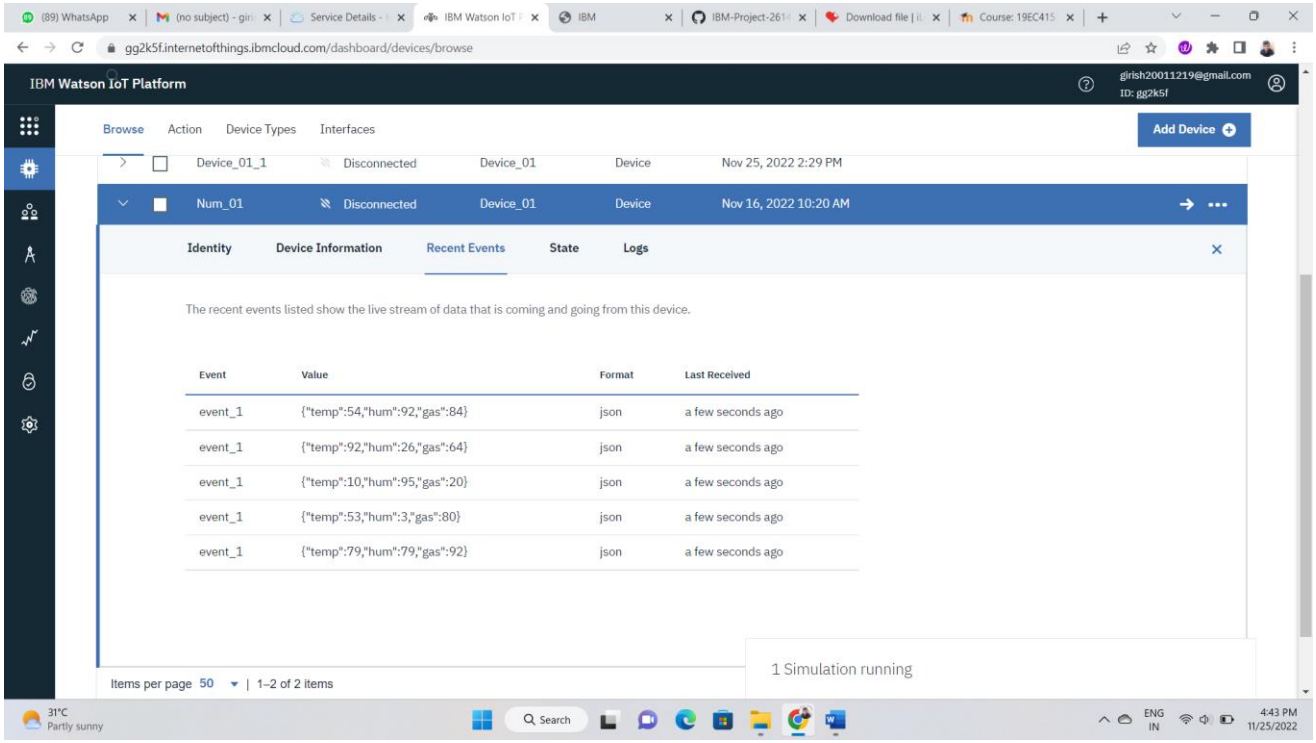
```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgId":  "gg2k5f",
        "typeId": "Device_01",
        "deviceId":"Num_01"
    },
    "auth": {
        "token": "pX!FpPNWcRkNwVxXu2"
```

```
 }
}

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 3.9.6
File Edit Shell Debug Options Window Help
Published data Successfully: %s {'temperature': 78, 'humidity': 58}
Published data Successfully: %s {'temperature': 68, 'humidity': 65}
Published data Successfully: %s {'temperature': 26, 'humidity': 93}
Published data Successfully: %s {'temperature': 42, 'humidity': 79}
Published data Successfully: %s {'temperature': -12, 'humidity': 17}
Published data Successfully: %s {'temperature': 78, 'humidity': 83}
Published data Successfully: %s {'temperature': -2, 'humidity': 78}
Published data Successfully: %s {'temperature': 45, 'humidity': 73}
Published data Successfully: %s {'temperature': 103, 'humidity': 62}
Published data Successfully: %s {'temperature': 99, 'humidity': 90}
Published data Successfully: %s {'temperature': 49, 'humidity': 2}
Published data Successfully: %s {'temperature': 39, 'humidity': 53}
Published data Successfully: %s {'temperature': 26, 'humidity': 47}
Published data Successfully: %s {'temperature': 99, 'humidity': 32}
Published data Successfully: %s {'temperature': 12, 'humidity': 89}
Published data Successfully: %s {'temperature': -11, 'humidity': 30}
Published data Successfully: %s {'temperature': 84, 'humidity': 51}
Published data Successfully: %s {'temperature': 113, 'humidity': 65}
Published data Successfully: %s {'temperature': 92, 'humidity': 62}
Published data Successfully: %s {'temperature': -19, 'humidity': 16}
Published data Successfully: %s {'temperature': -13, 'humidity': 57}
Published data Successfully: %s {'temperature': 13, 'humidity': 55}
Published data Successfully: %s {'temperature': 2, 'humidity': 60}
Published data Successfully: %s {'temperature': 94, 'humidity': 30}
Published data Successfully: %s {'temperature': 46, 'humidity': 71}
Published data Successfully: %s {'temperature': 77, 'humidity': 90}
Published data Successfully: %s {'temperature': 59, 'humidity': 71}
Published data Successfully: %s {'temperature': 17, 'humidity': 68}
Published data Successfully: %s {'temperature': 99, 'humidity': 22}
Published data Successfully: %s {'temperature': 85, 'humidity': 76}
Published data Successfully: %s {'temperature': 121, 'humidity': 10}
Published data Successfully: %s {'temperature': 29, 'humidity': 82}
Message received from IBM IoT Platform: light on
Message received from IBM IoT Platform: light on
Message received from IBM IoT Platform: light on
Message received from IBM IoT Platform: light on
Published data Successfully: %s {'temperature': 1, 'humidity': 12}
Published data Successfully: %s {'temperature': 102, 'humidity': 92}
Published data Successfully: %s {'temperature': 57, 'humidity': 79}
Ln: 7 Col: 0
13:17:00
Type here to search
30°C Cloudy
ENG IN
1:16 PM 11/25/2022


gg2k5f.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
girish20011219@gmail.com
ID: gg2k5f
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
Num_01
Connected
Device_01
Device
Nov 16, 2022 10:20 AM
Items per page 50
1–1 of 1 item
1 of 1 page
1 Simulation running
Type here to search
31°C Cloudy
ENG IN
2:18 PM 11/25/2022


gg2k5f.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
girish20011219@gmail.com
ID: gg2k5f
Browse
Action
Device Types
Interfaces
Add Device
Device_01_1 Disconnected Device_01 Device Nov 25, 2022 2:29 PM
Num_01 Disconnected Device_01 Device Nov 16, 2022 10:20 AM
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 {"temp":54,"hum":92,"gas":84} json a few seconds ago
event_1 {"temp":92,"hum":26,"gas":64} json a few seconds ago
event_1 {"temp":10,"hum":95,"gas":20} json a few seconds ago
event_1 {"temp":53,"hum":3,"gas":80} json a few seconds ago
event_1 {"temp":79,"hum":79,"gas":92} json a few seconds ago
Items per page 50 | 1–2 of 2 items
1 Simulation running
31°C
Partly sunny
Search
ENG
IN
4:43 PM
11/25/2022

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