

# PYTHON SCRIPT FOR GAS LEAKAGE DETECTION AND MONITORING SYSTEM

Date	19 Nov 2022
Team ID	PNT2022TMID29935
Project Name	Gas leakage detection and monitoring system

## PYTHON CODE:

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "x6troc"
```

```
deviceType = "PNT2022TMID29935"
```

```
deviceId = "6374679606"
```

```
authMethod = "token"
```

```
authToken = "eSJ(wSv_kaOwuZ?yIl"
```

```
# 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

```

```
gas=random.randint(0,200)

data = { 'gas' : gas }

def myOnPublishCallback():
    if gas>100:
        data = { 'gas' : gas }
        print ("Published gas_level = %s ppm" % gas, "//Gas alert!!")

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

    if not success:
        print("Not connected to IoT")
        time.sleep(1)

    deviceCli.commandCallback = myCommandCallback

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

## OUTPUT:

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A user profile is visible in the top right corner with the email 'veerasathishu074.ace@kgct.ac.in' and ID 'x6troc'. The main content area shows details for a specific device with ID '6374679606', which is 'Connected'. The device name is 'PNT2022TMID29935'. The 'Recent Events' tab is selected, showing a list of events. The events are as follows:

Event	Value	Format	Last Received
IoTSensor	{"gas":186}	json	a few seconds ago
IoTSensor	{"gas":132}	json	a few seconds ago
IoTSensor	{"gas":45}	json	a few seconds ago
IoTSensor	{"gas":0}	json	a few seconds ago
IoTSensor	{"gas":174}	json	a few seconds ago

The bottom of the screen shows a taskbar with two open windows: 'WhatsApp image...pdf' and 'WhatsApp image...pdf'. A 'Show all' button is visible in the bottom right corner of the taskbar.