

PROJECT DEVELOPMENT
PHASE Delivery of Sprint -1

| | |
|--------------|--|
| Date | 12 November 2022 |
| Team ID | PNT2022TMID22125 |
| Project Name | Gas Leakage Monitoring And Alerting System |

Sprint-1

Python code:

```
#IBM Watson IOT Platform

#pip install wiotp-sdk

import wiotp.sdk.device

import time

import random

myConfig = {

    "identity": {

        "orgId": "anrbh6",

        "typeId": "GAS-LEAKAGE",

        "deviceId": "12345"

    },

    "auth": {

        "token": "WL!rm4FNDOm+1UTvzL"

    }

}


def myCommandCallback(cmd):

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

```
m=cmd.data['command']  
  
if(a=="alarm ON"):  
    print("Alarm is turned ON")  
elif(a=="alarm OFF"):  
    print("Alarm is turned OFF")  
print(" ")
```

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

```
while True:  
    temp=random.randint(-20,125)  
    hum=random.randint(0,100)  
    haz_gas=random.randint(0,100)  
    myData={'temperature':temp, 'humidity':hum,'hazardous_gas':haz_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()
```

IBM WASTON OUTPUT:

PYTHON SHELL :

```
File Edit Shell Debug Options Window Help
Python 3.9.8 (tags/v3.9.8:bb3fdef, Nov 5 2021, 20:48:33) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
***** RESTART: C:\Users\Nandakumar V\Documents\python\ibm_iot.py *****
2022-11-18 19:29:04,811 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:anrbh6:GAS-LEAKAGE:12345
Published data Successfully: %s ('temperature': -6, 'humidity': 32, 'hazardous_gas': 5)
Published data Successfully: %s ('temperature': 82, 'humidity': 12, 'hazardous_gas': 55)
Published data Successfully: %s ('temperature': 31, 'humidity': 95, 'hazardous_gas': 7)
Published data Successfully: %s ('temperature': 12, 'humidity': 90, 'hazardous_gas': 61)
Published data Successfully: %s ('temperature': 61, 'humidity': 12, 'hazardous_gas': 83)
Published data Successfully: %s ('temperature': 89, 'humidity': 83, 'hazardous_gas': 25)
Published data Successfully: %s ('temperature': -8, 'humidity': 28, 'hazardous_gas': 26)
Published data Successfully: %s ('temperature': 42, 'humidity': 23, 'hazardous_gas': 87)
Published data Successfully: %s ('temperature': 114, 'humidity': 54, 'hazardous_gas': 80)
```

The screenshot shows the IBM Watson IoT Platform dashboard. The browser tabs include MIT App Inventor, Node-RED, Node-RED Dashboard, WhatsApp, and IBM Watson IoT Platform. The address bar shows the URL: anrbh6.internetofthings.ibmcloud.com/dashboard/devices/browse. The dashboard header shows the user's email (keerthanausha161@gmail.com) and ID (anrbh6). The main content area displays the details for a device with ID 12345, which is connected and named 'GAS-LEAKAGE'. The 'Recent Events' tab is selected, showing a table of events.

| Event | Value | Format | Last Received |
|--------|--|--------|-------------------|
| status | {"temperature":82,"humidity":37,"hazardous_ga... | json | a few seconds ago |
| status | {"temperature":54,"humidity":7,"hazardous_gas... | json | a few seconds ago |
| status | {"temperature":24,"humidity":6,"hazardous_gas... | json | a few seconds ago |
| status | {"temperature":109,"humidity":47,"hazardous_g... | json | a few seconds ago |
| status | {"temperature":53,"humidity":65,"hazardous_ga... | json | a few seconds ago |

IBM WASTON GRAPH:

