PROJECT DEVELOPMENT PHASE
Delivery Of Sprint-1

Date	12 November 2022
Team ID	PNT2022TMID22125
Project Name	Gas leakage monitoring and alerting system for industries

SPRINT 1:

```python
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json

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()
BASE_URL = "https://api.openweathermap.org/data/2.5/weather?"
CITY = "Chennai, IN"
URL = BASE_URL + "q=" + CITY + "&units=metric"+"&appid=" +
"c5e2b2a61b6f7264b2eb343713aa4c3b"

while True:
    response = requests.get(URL)
    if response.status_code == 200:
```

```
    data = response.json()
  main = data['main']
  temperature = main['temp']
  humidity = main['humidity']
  haz_gas=random.randint(0,100)
  myData={'temperature':temperature, 'humidity':humidity,'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()
```

PYTHON SHELL OUTPUT:

```
============ RESTART: C:\Users\Nandakumar V\Documents\python\gas.py ============
2022-11-19 13:52:34,705   wiotp.sdk.device.client.DeviceClient  INFO    Connected successfully: d:anrbh6:GAS-LEAKAGE:12345
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 78}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 13}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 28}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 75}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 62}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 70}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 84}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 2}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 90}
Published data Successfully: %s {'temperature': 28.99, 'humidity': 65, 'hazardous_gas': 73}
```

IBM WATSON OUTPUT:

Identity	Device Information	Recent Events	State	Logs

√ **Showing Raw Data** | No Interfaces Available

Property	Value	Type	Event	Last Received
temperature	28.99	Number	status	a few seconds ago
humidity	65	Number	status	a few seconds ago
hazardous_gas	21	Number	status	a few seconds ago

IBM GRAPH: