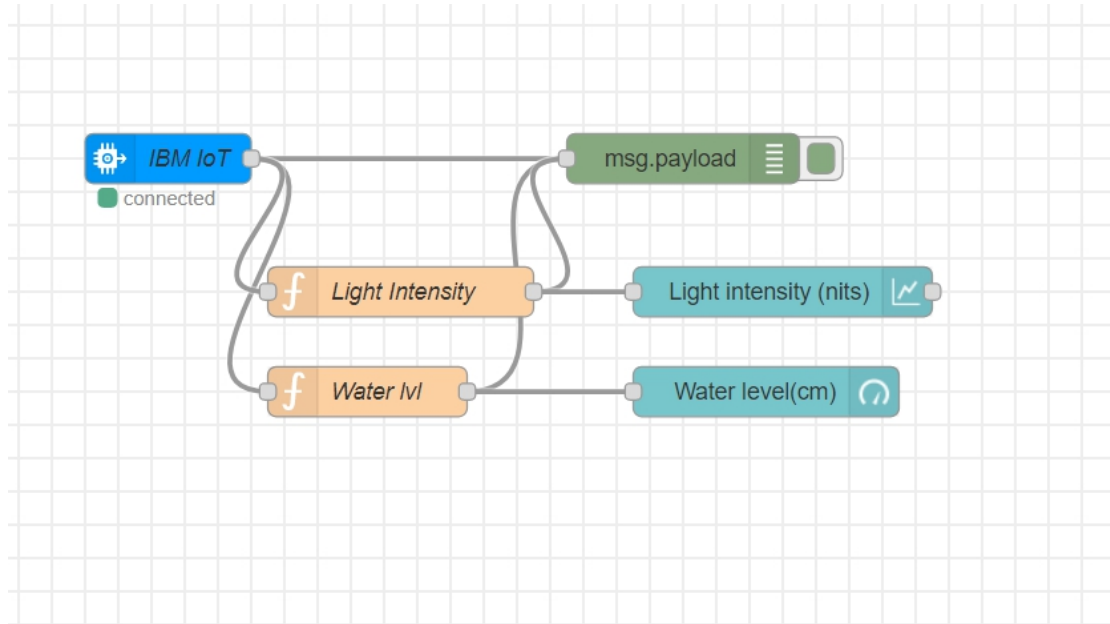
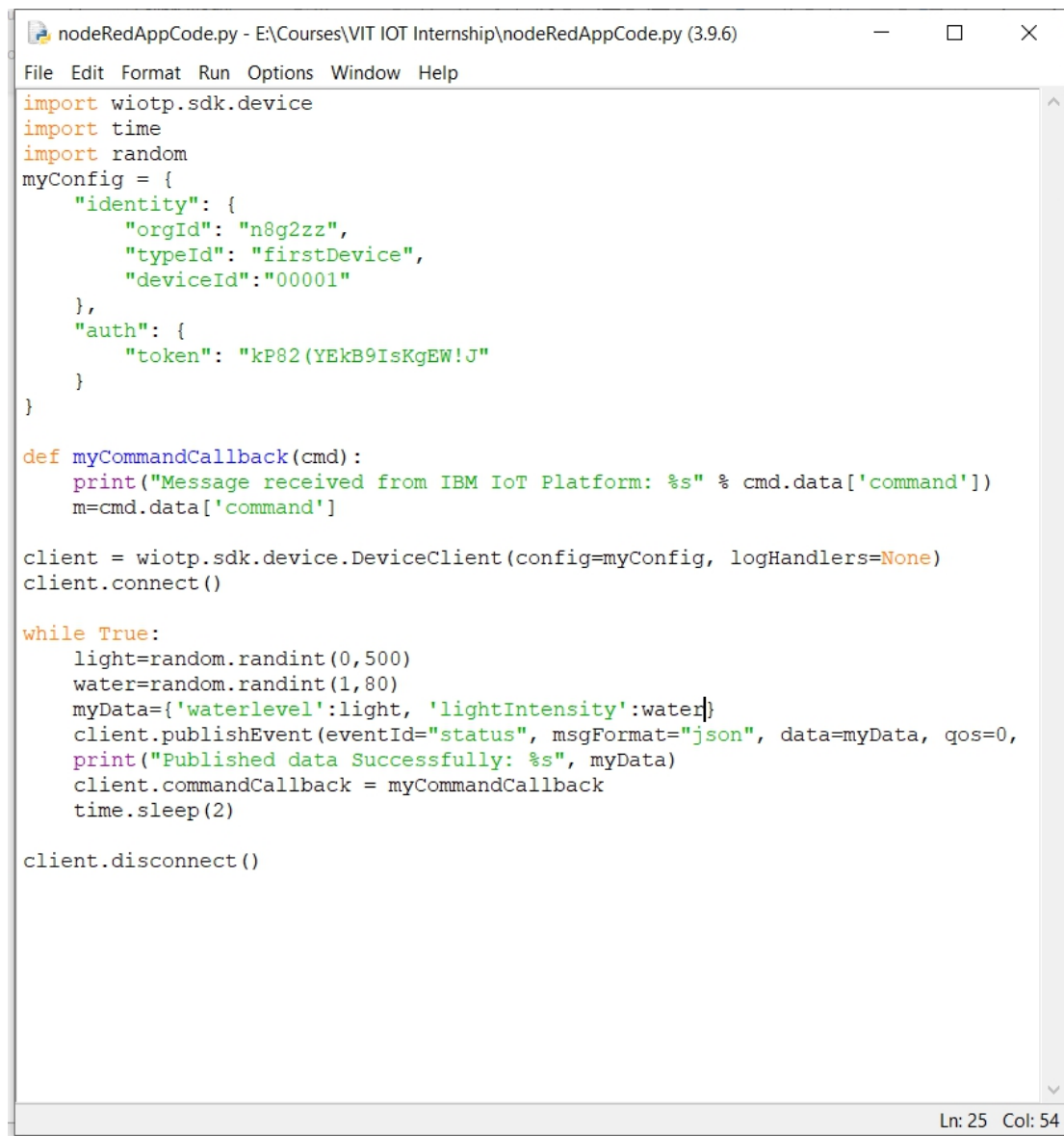


Siddharth Gurnani 19BCE10014

VIT IOT EXTERNSHIP



Map of the node RED app (FLOW)



```
nodeRedAppCode.py - E:\Courses\VIT IOT Internship\nodeRedAppCode.py (3.9.6)
File Edit Format Run Options Window Help

import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "n8g2zz",
        "typeId": "firstDevice",
        "deviceId": "00001"
    },
    "auth": {
        "token": "kP82(YEkB9IsKgEW!J"
    }
}

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

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

while True:
    light=random.randint(0,500)
    water=random.randint(1,80)
    myData={'waterlevel':light, 'lightIntensity':water}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)

client.disconnect()
```

Ln: 25 Col: 54

Snapshot of the python code

(Full code is as follows:)

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "n8g2zz",
        "typeId": "firstDevice",
        "deviceId": "00001"
    },
    "auth": {
        "token": "kP82(YEkB9IsKgEW!J"
    }
}

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

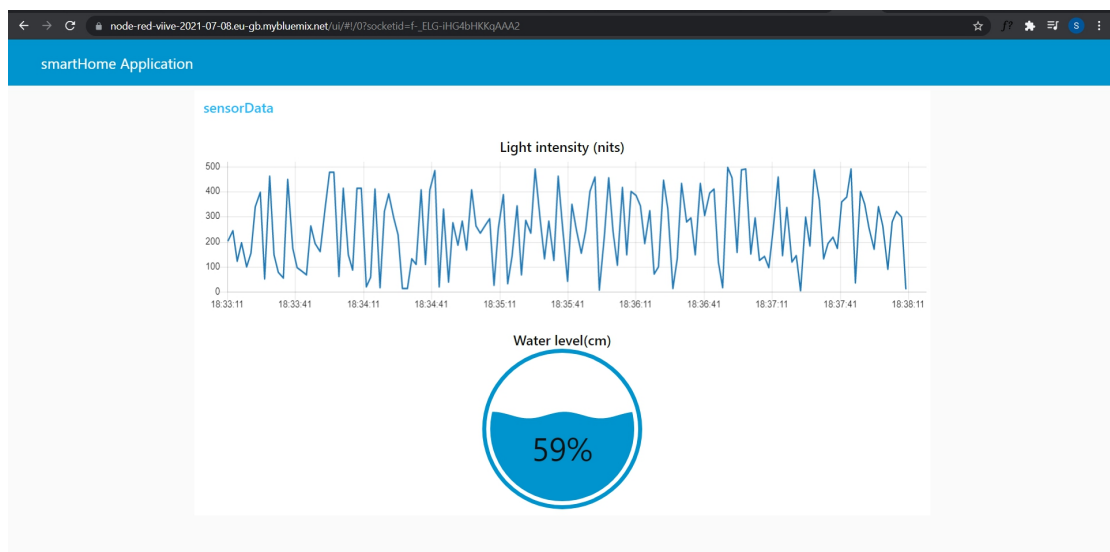
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    light=random.randint(0,500)
    water=random.randint(1,80)
    myData={'waterlevel':light, 'lightIntensity':water}
    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()
```

```
*IDLE Shell 3.9.6*
File Edit Shell Debug Options Window Help
Published data Successfully: %s {'waterlevel': 33, 'lightIntensity': 3}
Published data Successfully: %s {'waterlevel': 142, 'lightIntensity': 52}
Published data Successfully: %s {'waterlevel': 343, 'lightIntensity': 54}
Published data Successfully: %s {'waterlevel': 67, 'lightIntensity': 66}
Published data Successfully: %s {'waterlevel': 286, 'lightIntensity': 72}
Published data Successfully: %s {'waterlevel': 234, 'lightIntensity': 52}
Published data Successfully: %s {'waterlevel': 491, 'lightIntensity': 73}
Published data Successfully: %s {'waterlevel': 290, 'lightIntensity': 9}
Published data Successfully: %s {'waterlevel': 132, 'lightIntensity': 20}
Published data Successfully: %s {'waterlevel': 283, 'lightIntensity': 38}
Published data Successfully: %s {'waterlevel': 124, 'lightIntensity': 46}
Published data Successfully: %s {'waterlevel': 463, 'lightIntensity': 15}
Published data Successfully: %s {'waterlevel': 260, 'lightIntensity': 19}
Published data Successfully: %s {'waterlevel': 41, 'lightIntensity': 14}
Published data Successfully: %s {'waterlevel': 350, 'lightIntensity': 51}
Published data Successfully: %s {'waterlevel': 251, 'lightIntensity': 47}
Published data Successfully: %s {'waterlevel': 153, 'lightIntensity': 26}
Published data Successfully: %s {'waterlevel': 245, 'lightIntensity': 64}
Published data Successfully: %s {'waterlevel': 400, 'lightIntensity': 68}
Published data Successfully: %s {'waterlevel': 459, 'lightIntensity': 75}
Published data Successfully: %s {'waterlevel': 8, 'lightIntensity': 75}
Published data Successfully: %s {'waterlevel': 222, 'lightIntensity': 34}
Published data Successfully: %s {'waterlevel': 455, 'lightIntensity': 59}
Published data Successfully: %s {'waterlevel': 239, 'lightIntensity': 23}
Published data Successfully: %s {'waterlevel': 106, 'lightIntensity': 63}
Published data Successfully: %s {'waterlevel': 416, 'lightIntensity': 73}
Published data Successfully: %s {'waterlevel': 149, 'lightIntensity': 16}
Published data Successfully: %s {'waterlevel': 401, 'lightIntensity': 47}
Published data Successfully: %s {'waterlevel': 386, 'lightIntensity': 27}
Published data Successfully: %s {'waterlevel': 343, 'lightIntensity': 75}
Published data Successfully: %s {'waterlevel': 193, 'lightIntensity': 79}
Published data Successfully: %s {'waterlevel': 325, 'lightIntensity': 2}
Published data Successfully: %s {'waterlevel': 71, 'lightIntensity': 64}
Published data Successfully: %s {'waterlevel': 100, 'lightIntensity': 39}
Published data Successfully: %s {'waterlevel': 446, 'lightIntensity': 79}
Published data Successfully: %s {'waterlevel': 330, 'lightIntensity': 56}
Published data Successfully: %s {'waterlevel': 14, 'lightIntensity': 6}
Published data Successfully: %s {'waterlevel': 130, 'lightIntensity': 75}
Published data Successfully: %s {'waterlevel': 434, 'lightIntensity': 56}
Ln: 5 Col: 0
```

Python code in action, publishing real time data to the IBM cloud



Snapshot of the UI of the node RED app