

# **VIT-IOT(INDUSTRY CERTIFICATE INTERNSHIP PROGRAM)**

## **ASSIGNMENT-3**

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### Assignment-3:

Develop a code to upload the water tank level and light intensity values to the IBM IoT platform and visualize them in the web application.

#### Python Code:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "d9cbnt",
        "typeId": "FirstDevice",
        "deviceId": "14831"
    },
    "auth": {
        "token": "SaiVardhan14831"
    }
}

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:
    wlevel=random.randint(0,100)
    light=random.randint(0,100)
    myData={'Water_Level':wlevel, 'Light_Intensity':light}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
|
```

**Fig.1**Python code editor window

#### CODE:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
```

```

        "orgId": "d9cbnt",
        "typeId": "FirstDevice",
        "deviceId": "14831"
    },
    "auth": {
        "token": "SaiVardhan14831"
    }
}

```

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

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

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while True:
    wlevel=random.randint(0,100)
    light=random.randint(0,100)
    myData={'Water_Level':wlevel, 'Light_Intensity':light}
    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()

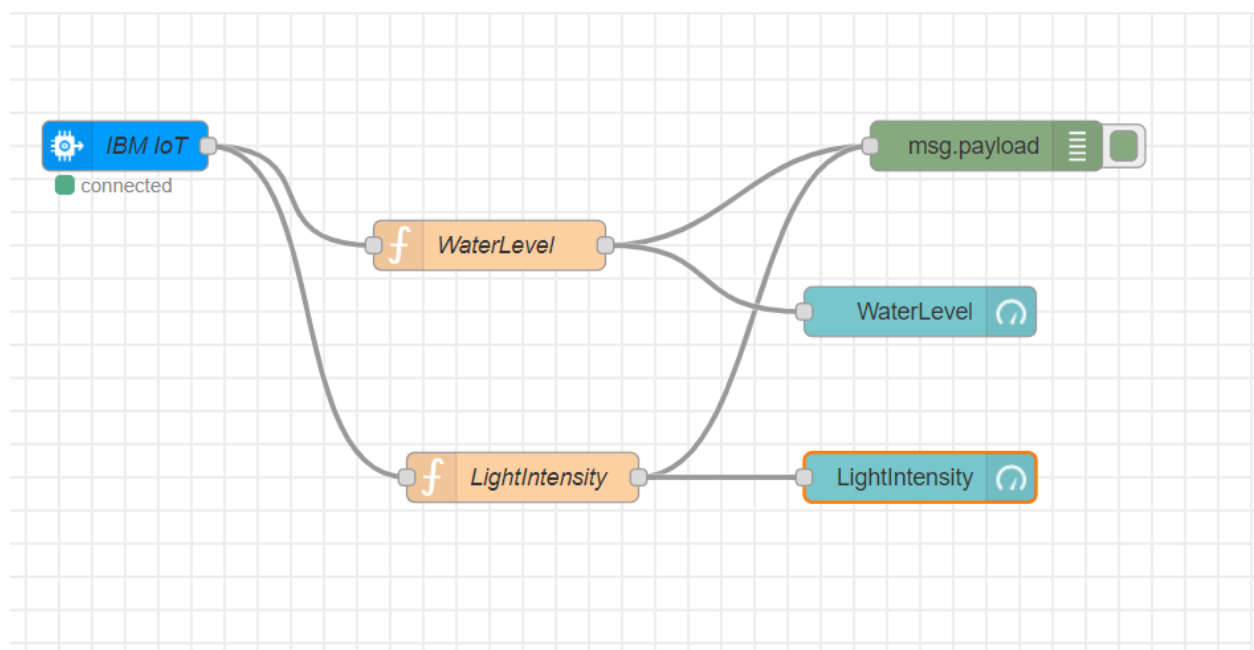
```

```

>>>
==== RESTART: C:/Users/avina/Desktop/saivardhan/externship/assignmenttttt.py ====
2021-07-17 17:18:26,965 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: d:d9cbnt:FirstDevice:14831
Published data Successfully: %s {'Water_Level': 41, 'Light_Intensity': 53}
Published data Successfully: %s {'Water_Level': 2, 'Light_Intensity': 4}
Published data Successfully: %s {'Water_Level': 14, 'Light_Intensity': 89}
Published data Successfully: %s {'Water_Level': 1, 'Light_Intensity': 54}
Published data Successfully: %s {'Water_Level': 52, 'Light_Intensity': 97}
Published data Successfully: %s {'Water_Level': 99, 'Light_Intensity': 77}
Published data Successfully: %s {'Water_Level': 30, 'Light_Intensity': 73}
Published data Successfully: %s {'Water_Level': 91, 'Light_Intensity': 85}
Published data Successfully: %s {'Water_Level': 45, 'Light_Intensity': 98}

```

**Fig2.**Output of the python code→ It is sending some random data values to the device



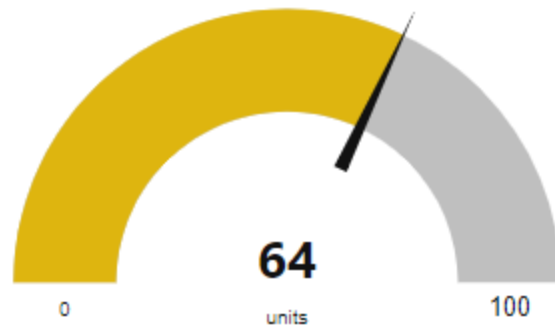
**Fig3.**Node Red flow chart → In this The IBM IoT Node connects the Device with python code

iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number 89
7/17/2021, 5:18:33 PM node: 9afd775f.270c98 iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number 1
7/17/2021, 5:18:33 PM node: 9afd775f.270c98 iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number 54
7/17/2021, 5:18:35 PM node: 9afd775f.270c98 iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number 52
7/17/2021, 5:18:35 PM node: 9afd775f.270c98 iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number 97
7/17/2021, 5:18:37 PM node: 9afd775f.270c98 iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number 99
7/17/2021, 5:18:37 PM node: 9afd775f.270c98 iot-2/type/FirstDevice/id/14831/evt/status/fmt/json : msg.payload : number

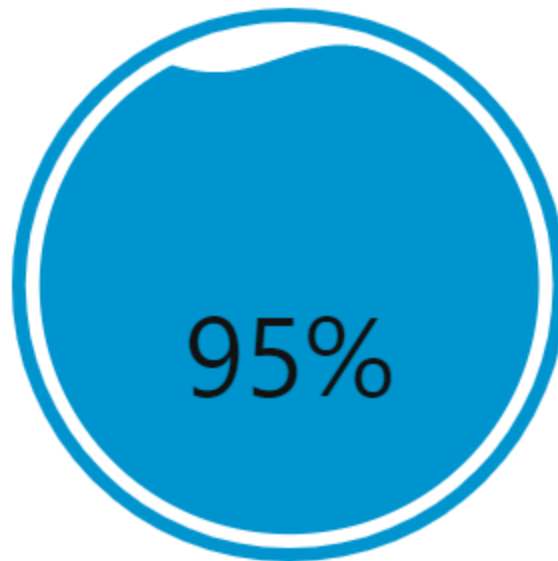
**Fig4.**Data received successfully from python code

Sensor

LightIntensity



WaterLevel



**Fig5.**Final webpage it also receiving the same data produced by the random variables in python