VIT-IOT(INDUSTRY CERTIFICATE INTERNSHIP PROGRAM)

ASSIGNMENT-3

NAME:TANNIRU SAI VARDHAN
MAIL ID: saivardhantanniru800@gmail.com

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"
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    "auth": {
        "token": "SaiVardhan14831"
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def myCommandCallback(cmd):
            print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
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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, 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

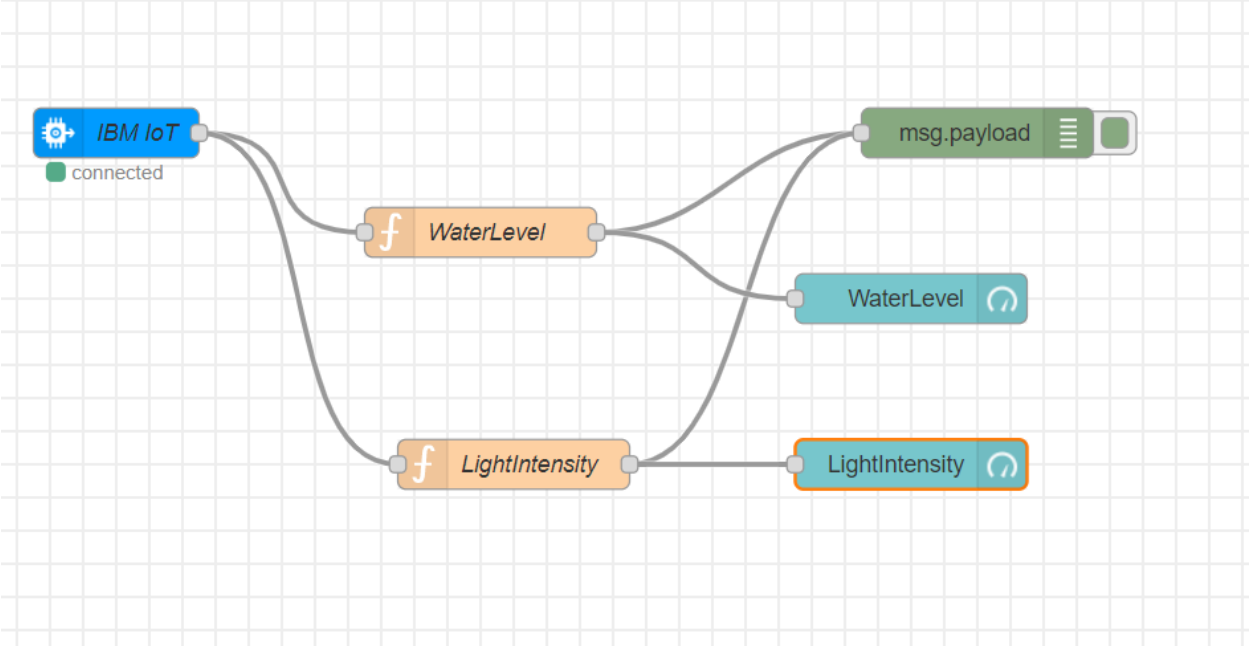

Fig3. Node Red flow chart → In this The IBM IoT Node connects the Device with python code

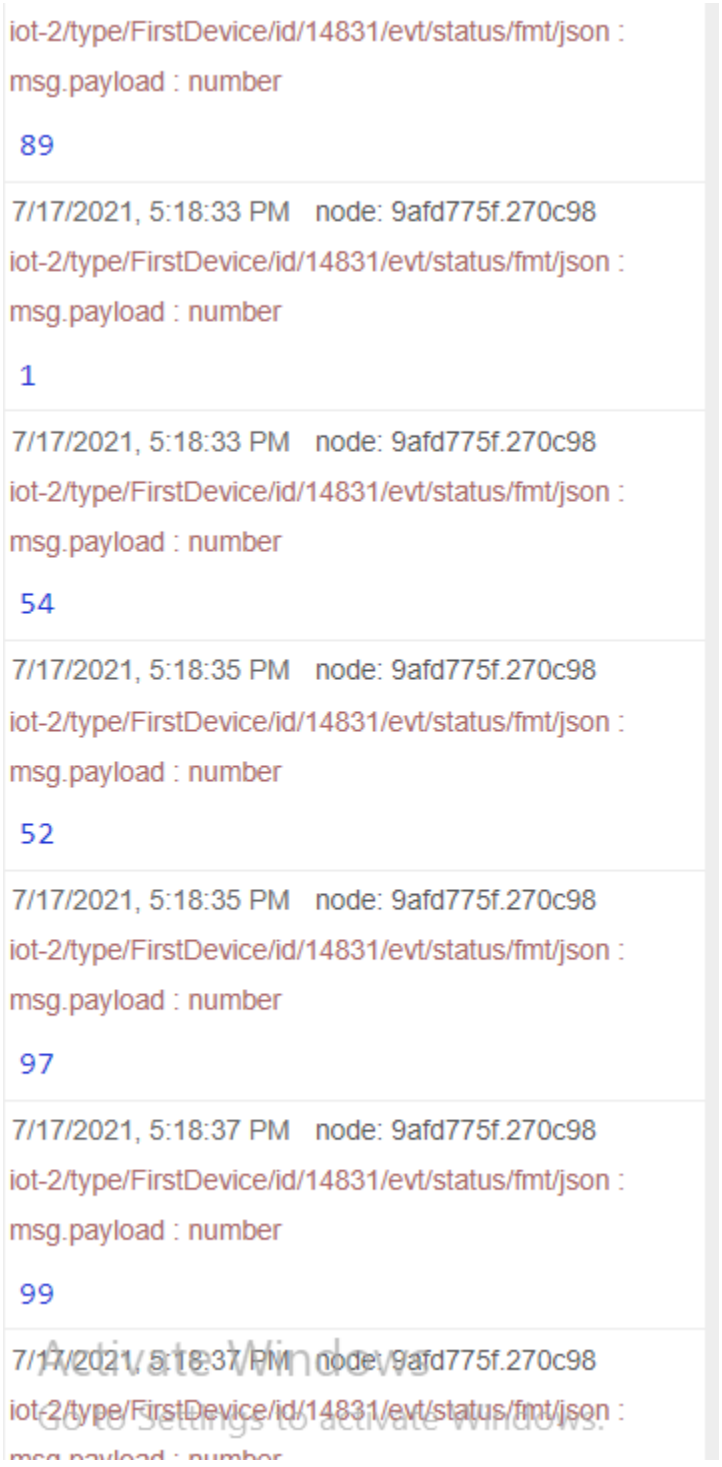

Fig4. Data received successfully from python code

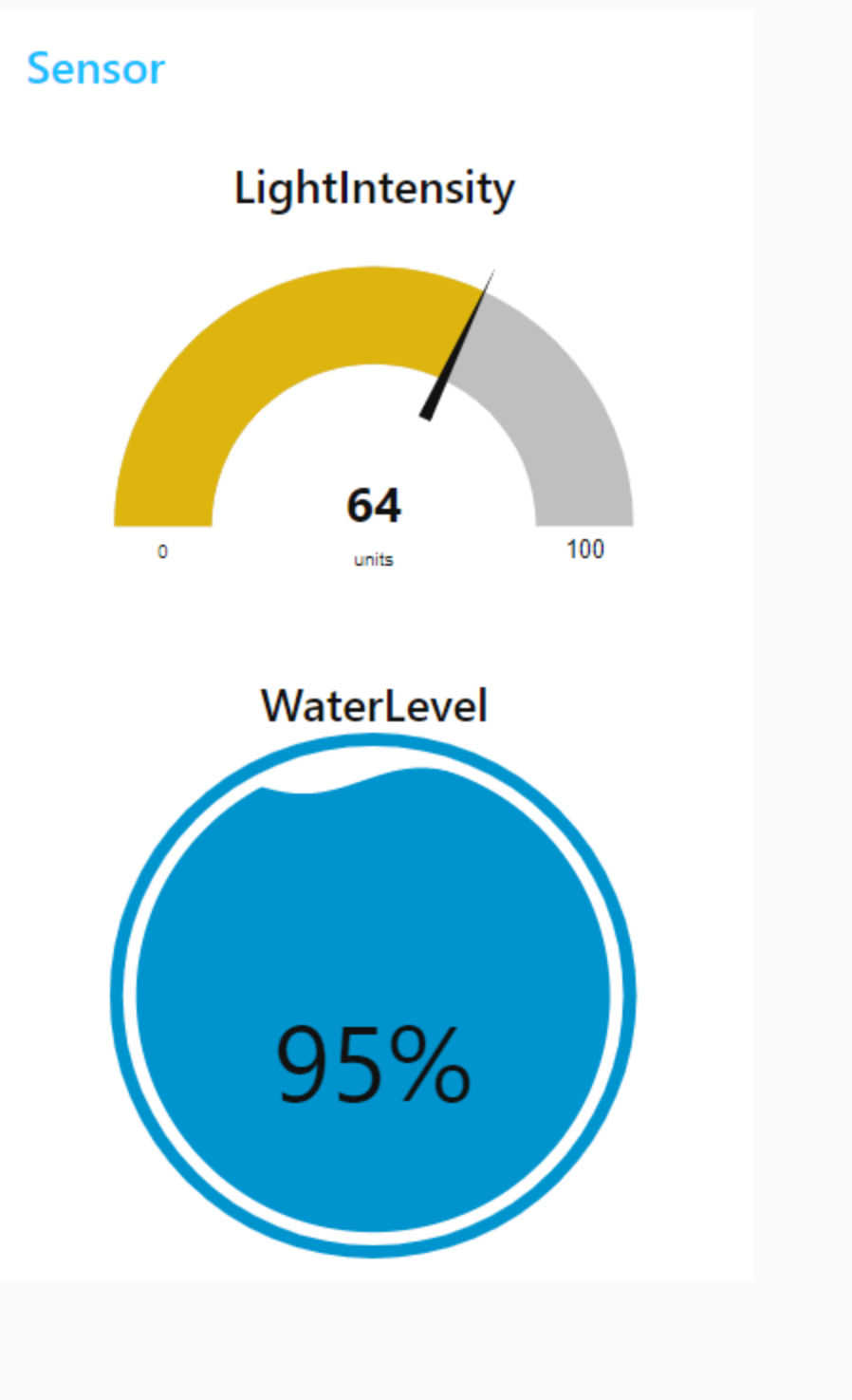

Fig5. Final webpage it aslo receiving the same data produced by the random variables in python