ASSIGNMENT-3

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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:

```python
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "08qpjr",
        "typeId": "VITDEVICE",
        "deviceId":"627"
},
"auth": {
    "token": "12345678"
    }
}
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, o
    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": "08qpjr",
        "typeId": "VITDEVICE",

```python
        "deviceId":"627"
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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/maver/AppData/Local/Programs/Python/Python39/iot 2.py ===
2021-07-18 21:25:39,391    wiotp.sdk.device.client.DeviceClient    INFO    Connecte
d successfully: d:08qpjr:VITDEVICE:627
Published data Successfully: %s {'Water_Level': 84, 'Light_Intensity': 81}
Published data Successfully: %s {'Water_Level': 68, 'Light_Intensity': 19}
Published data Successfully: %s {'Water_Level': 50, 'Light_Intensity': 55}
Published data Successfully: %s {'Water_Level': 46, 'Light_Intensity': 4}
Published data Successfully: %s {'Water_Level': 46, 'Light_Intensity': 85}
Published data Successfully: %s {'Water_Level': 48, 'Light_Intensity': 13}
Published data Successfully: %s {'Water_Level': 100, 'Light_Intensity': 12}
Published data Successfully: %s {'Water_Level': 23, 'Light_Intensity': 2}
Published data Successfully: %s {'Water_Level': 26, 'Light_Intensity': 1}
Published data Successfully: %s {'Water_Level': 18, 'Light_Intensity': 94}
Published data Successfully: %s {'Water_Level': 49, 'Light_Intensity': 61}
Published data Successfully: %s {'Water_Level': 1, 'Light_Intensity': 79}
Published data Successfully: %s {'Water_Level': 9, 'Light_Intensity': 40}
Published data Successfully: %s {'Water_Level': 70, 'Light_Intensity': 99}
Published data Successfully: %s {'Water_Level': 90, 'Light_Intensity': 50}
```

Fig2.

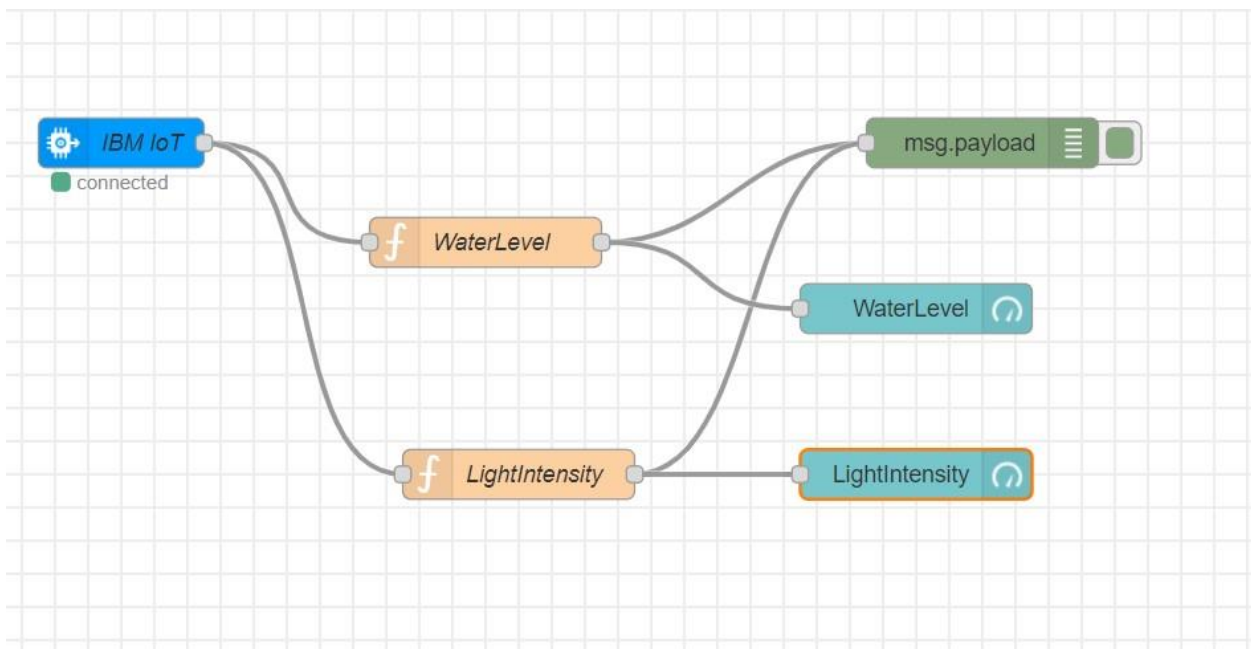Output of the python code→ It is sending some random data values to the device

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

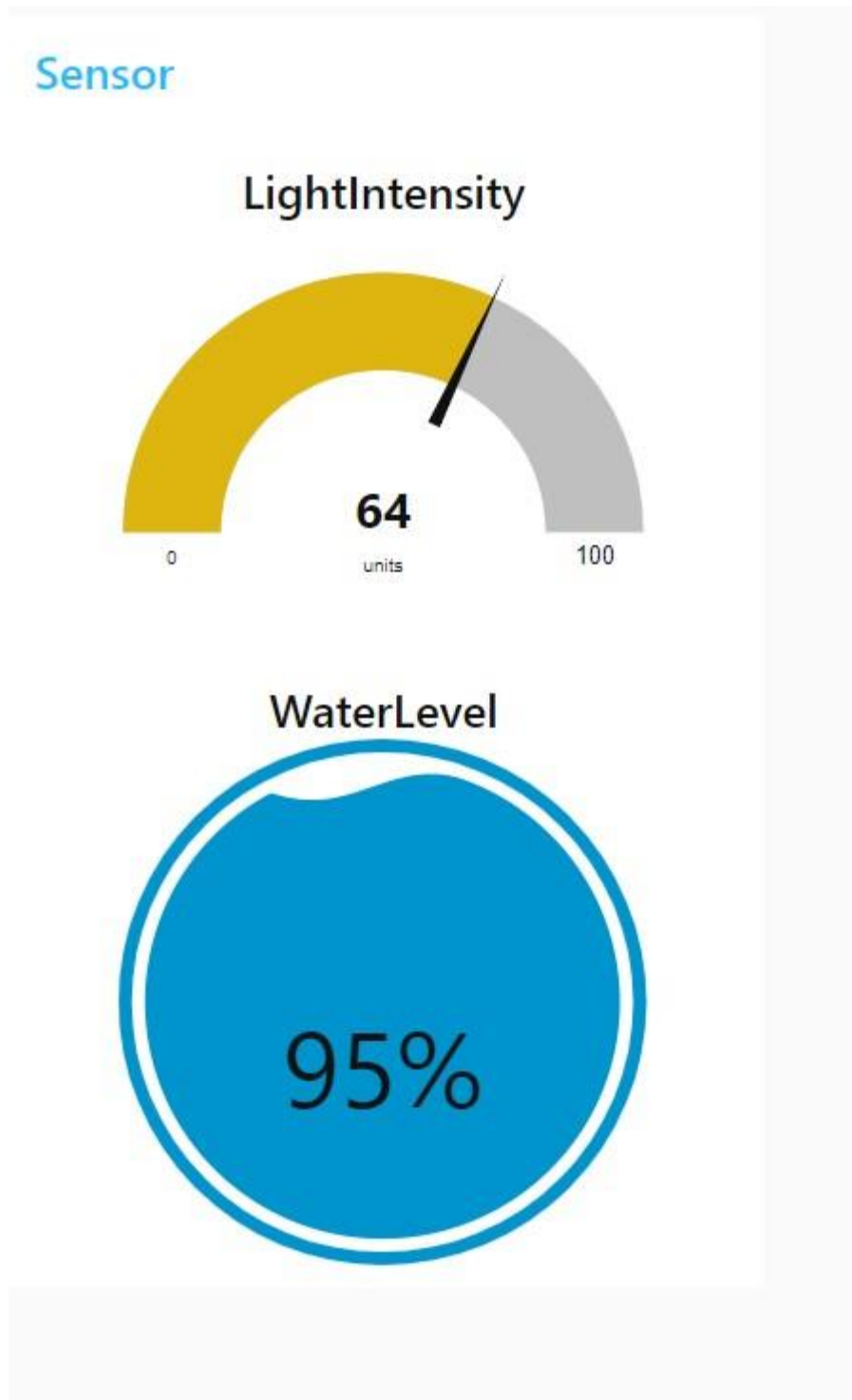**Fig4.**

Data received successfully from python code

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