VIT-IOT(INDUSTRY CERTIFICATE INTERNSHIP PROGRAM)

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": "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()
```

CODE:

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import time import
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    wlevel=random.randint(0,100)
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    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/assignmentttt.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}
|
```

Output of the python code→ It is sending some random data values to the device
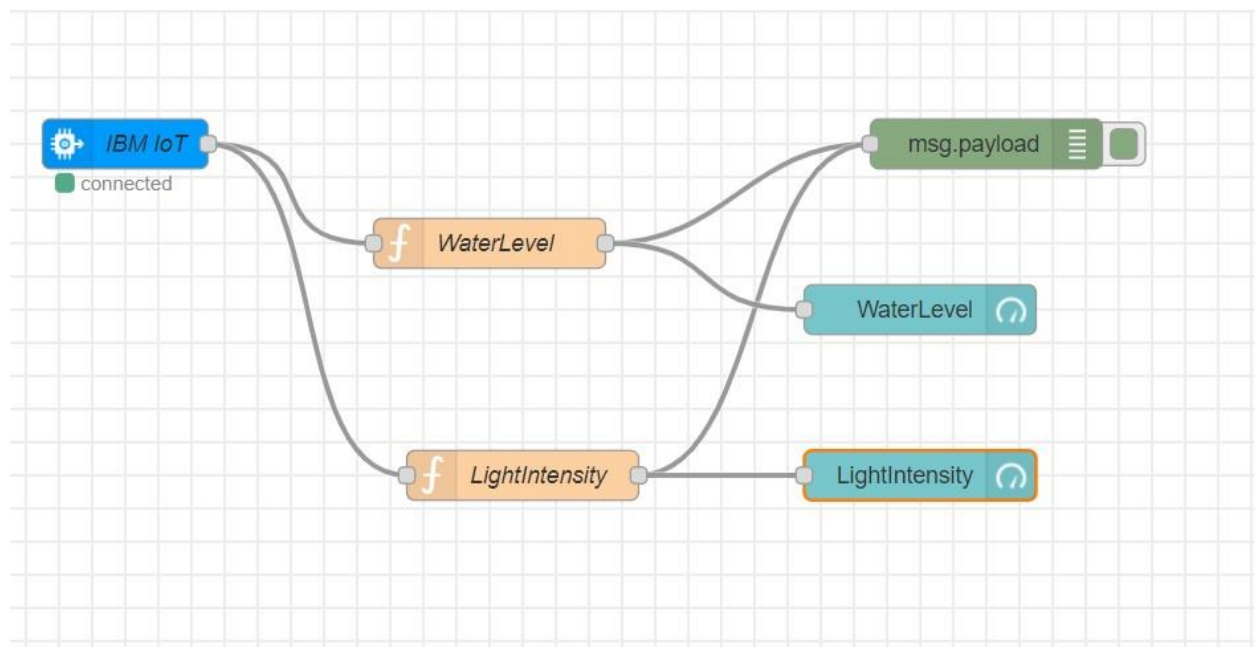
Node Red flow chart → In this The IBM IoT Node connects the Device with python code

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 :
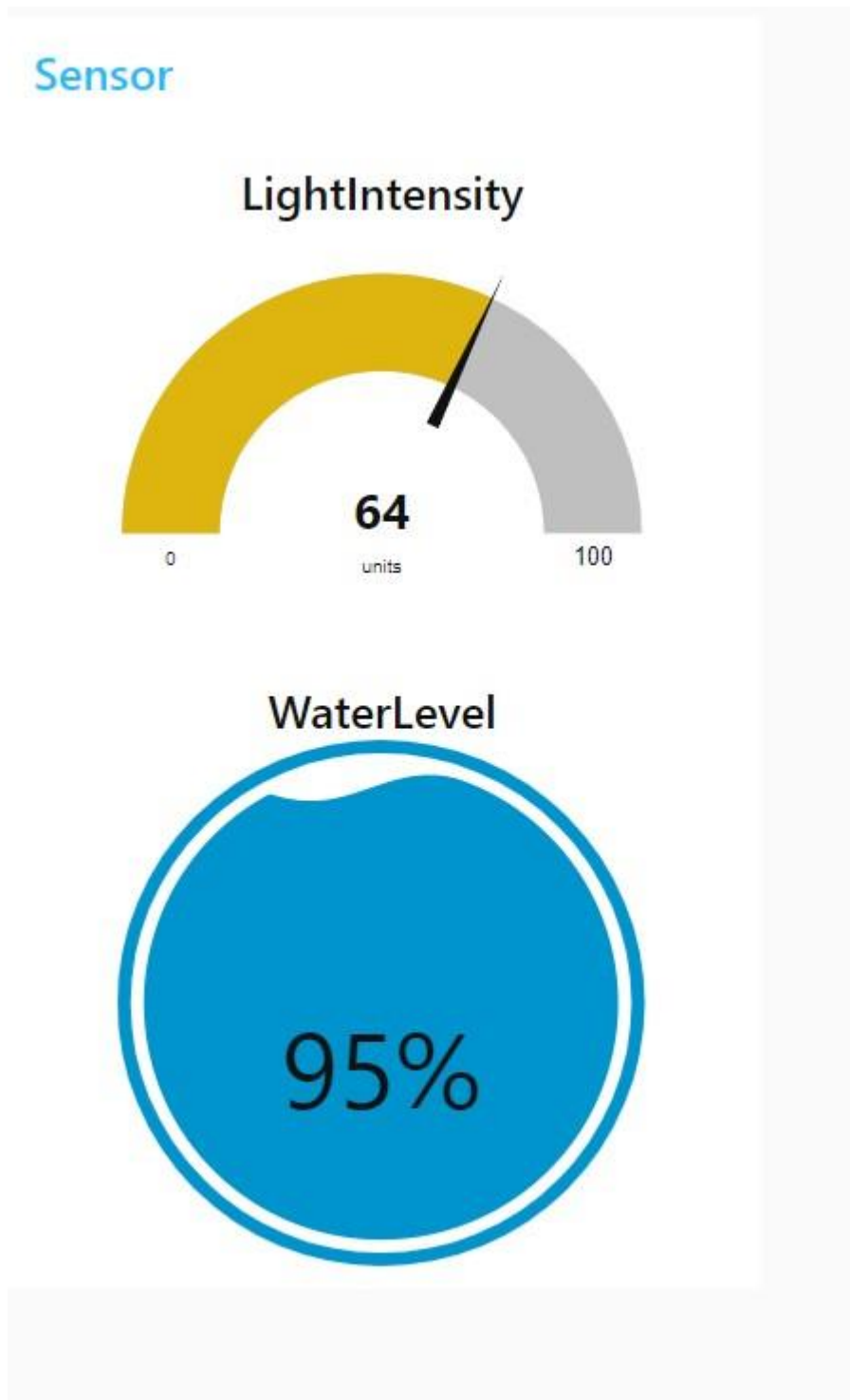msg.payload : number

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

Data received successfully from python code

Sensor

LightIntensity

0   **64**   100

units

WaterLevel

95%

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