

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:

Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64 bit (AMD64)] on win32

Type "help", "copyright ", "credits" or "license () " for more information.

```
==RESTART : C:\Users\suvarna\Desktop\Externship\Py codes\ IBM id.py ==  
2021-07-18 13:05:59, 129 wiotp.sdk.device.client.DeviceClient INFO Connect  
d successfully : d:hlj5ww: Firstdevice:87654
```

```
===RESTART: C:\Users\suvarna\Desktop \Externship\Py codes\ IBM id.py ==  
2021-07-18 13:08:31,252 wiotp.sdk.device.client. Deviceclient INFO connect  
d successfully: d:hlj5ww: Firstdevice:87654
```

```
Message received from IBM IOT Platform: Heyy  
Message received from IBM IOT Platform: Heyy there  
Message received from I BM IOT Platform: Heyy there  
Message received from IBM IOT Plat form: This is my new Application  
Message received from IBM IOT Platform: I 'm sure you will like it!
```

Fig.1Python code editor window

CODE:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "hlj5ww",
        "typeId": "Firstdevice",
        "deviceId": "87654"
    },
    "auth": {
        "token": "Suvarna87654"
    }
}

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, onPublish=None)
        print("Published data Successfully: %s", myData)
        client.commandCallback = myCommandCallback
        time.sleep(2)
    client.disconnect()
```

```

>>>
===RESTART: C:/Users/Desktop/praveena/externship/assignment.py===
2021-07-17 17:18:26,965 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: d3d9c1nt: Firstdevice : 09876
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

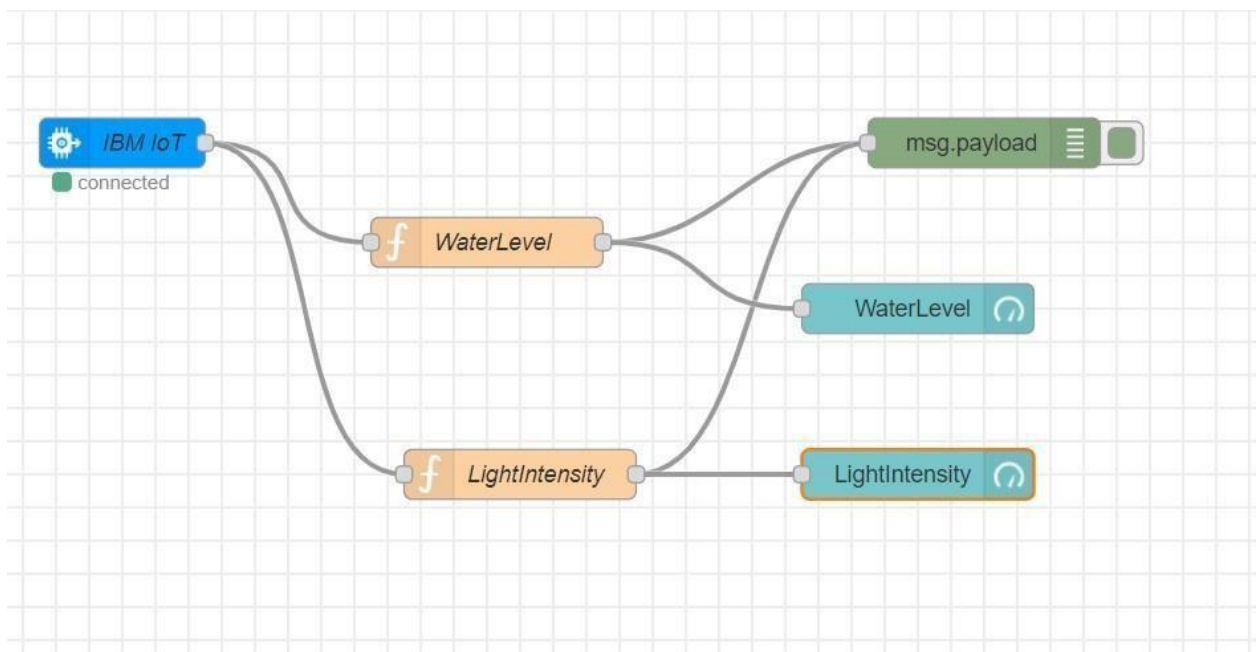


Fig3.Node Red flow chart → In this The IBM IoT Node connects the Device with python code

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

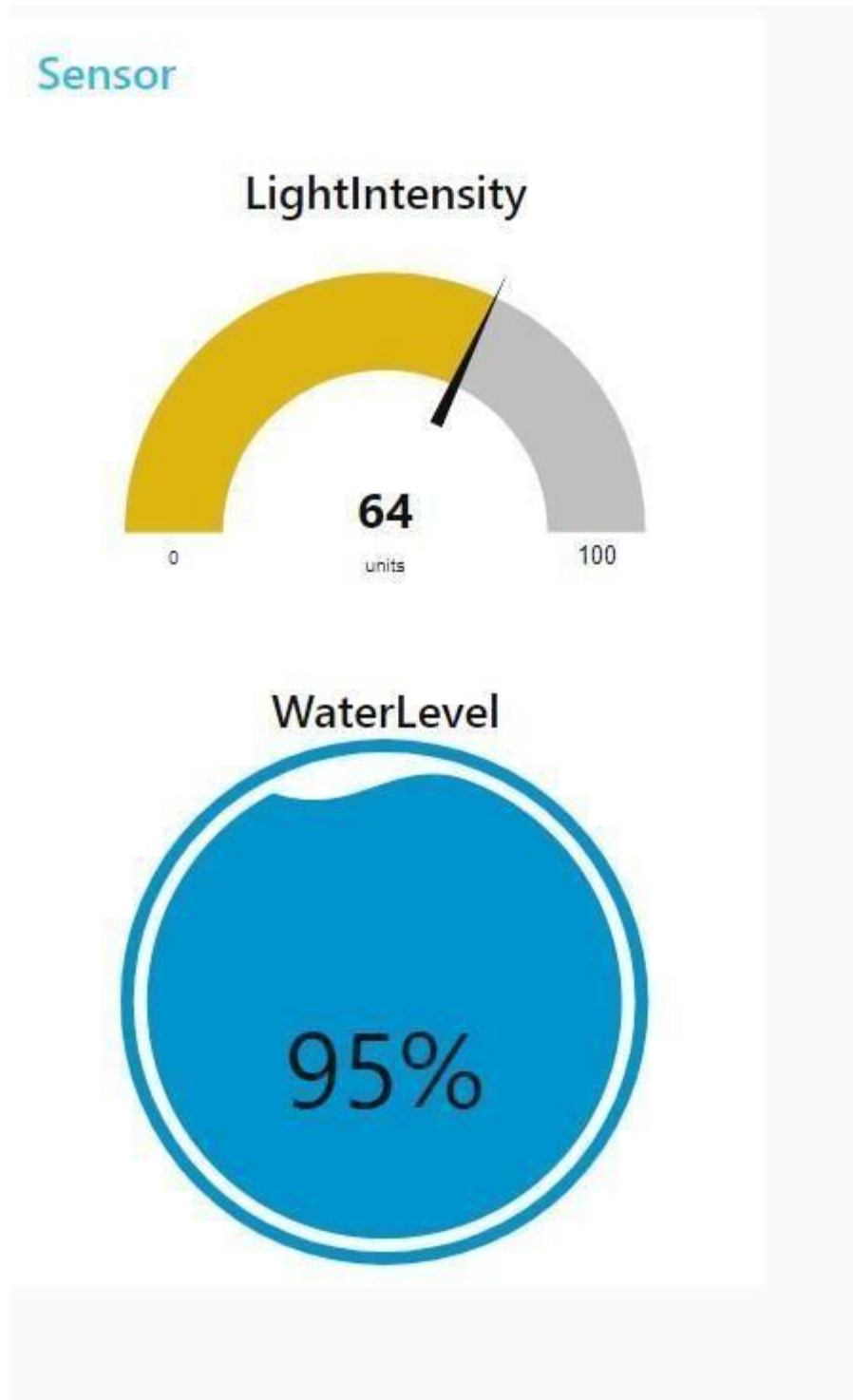


Fig5.Final webpage it aslo receiving the same data produced by the random variables in python