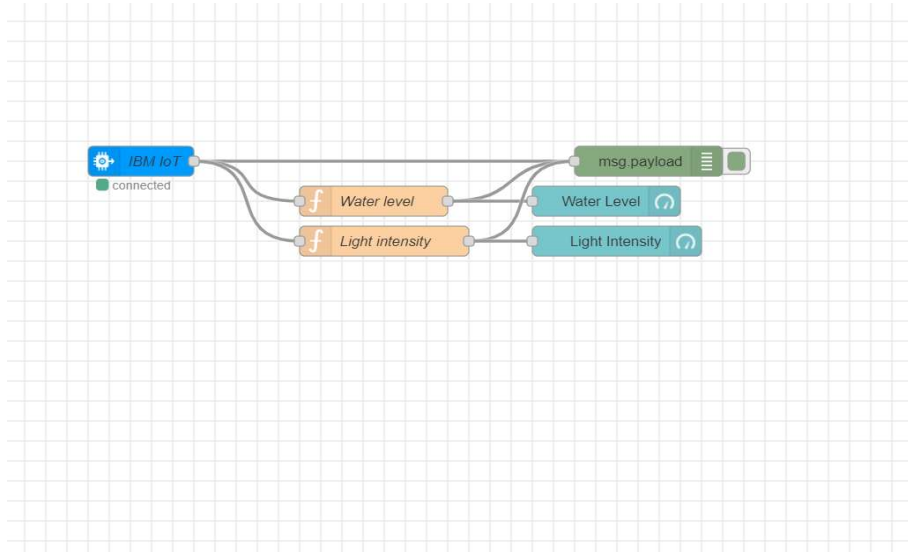# Assignment-3

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Reg no: 19BEC1246

Node Red flow:

Python Code:

```
assignment3.py - C:\Users\Shreyansh\OneDrive\Desktop\IOT\assignment3.py (3.9.6)        —    □    ×
File  Edit  Format  Run  Options  Window  Help
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgId": "lzlsjs",
        "typeId": "Assignment3",
        "deviceId":"54913"
    },
    "auth": {
        "token": "8987000566"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    #if(m == "lighton"):
        #print("....Light is ON....")
    #elif(m == "lightoff"):
        #print("....Light is OFF....")
    #print()


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

while True:
    level=random.randint(0,100)
    intensity=random.randint(0,100)
    myData={'level':level, 'intensity':intensity}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

Output (Python shell and node red):

IDLE Shell 3.9.6*

File Edit Shell Debug Options Window Help

```
Published data Successfully: %s {'level': 77, 'intensity': 68}
Published data Successfully: %s {'level': 45, 'intensity': 90}
Published data Successfully: %s {'level': 14, 'intensity': 82}
Published data Successfully: %s {'level': 59, 'intensity': 26}
Published data Successfully: %s {'level': 87, 'intensity': 15}
Published data Successfully: %s {'level': 2, 'intensity': 90}
Published data Successfully: %s {'level': 8, 'intensity': 77}
Published data Successfully: %s {'level': 45, 'intensity': 37}
Published data Successfully: %s {'level': 28, 'intensity': 99}
Published data Successfully: %s {'level': 8, 'intensity': 63}
Published data Successfully: %s {'level': 56, 'intensity': 53}
Published data Successfully: %s {'level': 41, 'intensity': 89}
Published data Successfully: %s {'level': 100, 'intensity': 3}
Published data Successfully: %s {'level': 73, 'intensity': 90}
Published data Successfully: %s {'level': 14, 'intensity': 46}
Published data Successfully: %s {'level': 38, 'intensity': 83}
Published data Successfully: %s {'level': 13, 'intensity': 87}
Published data Successfully: %s {'level': 43, 'intensity': 95}
Published data Successfully: %s {'level': 33, 'intensity': 84}
Published data Successfully: %s {'level': 72, 'intensity': 57}
Published data Successfully: %s {'level': 80, 'intensity': 46}
Published data Successfully: %s {'level': 39, 'intensity': 45}
Published data Successfully: %s {'level': 70, 'intensity': 66}
Published data Successfully: %s {'level': 61, 'intensity': 100}
Published data Successfully: %s {'level': 16, 'intensity': 17}
Published data Successfully: %s {'level': 42, 'intensity': 29}
Published data Successfully: %s {'level': 67, 'intensity': 66}
Published data Successfully: %s {'level': 2, 'intensity': 70}
Published data Successfully: %s {'level': 8, 'intensity': 17}
Published data Successfully: %s {'level': 70, 'intensity': 26}
Published data Successfully: %s {'level': 49, 'intensity': 64}
Published data Successfully: %s {'level': 9, 'intensity': 40}
Published data Successfully: %s {'level': 96, 'intensity': 77}
Published data Successfully: %s {'level': 41, 'intensity': 35}
Published data Successfully: %s {'level': 27, 'intensity': 90}
Published data Successfully: %s {'level': 25, 'intensity': 21}
Published data Successfully: %s {'level': 25, 'intensity': 77}
Published data Successfully: %s {'level': 77, 'intensity': 1}
Published data Successfully: %s {'level': 21, 'intensity': 0}
```

debug

7/18/2021, 1:21:57 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : Object
▶{ level: 2, intensity: 90 }

7/18/2021, 1:21:58 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : number
2

7/18/2021, 1:21:59 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : number
90

7/18/2021, 1:22:00 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : Object
▶{ level: 8, intensity: 77 }

7/18/2021, 1:22:01 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : number
8

7/18/2021, 1:22:02 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : number
77

7/18/2021, 1:22:03 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : Object
▶{ level: 45, intensity: 37 }

7/18/2021, 1:22:04 AM node: 7ab052b7.5622ac
iot-2/type/Assignment3/id/54913/evt/status/fmt/json : msg.payload : number
45

Output (Python shell and Web ui):

Edit Shell Debug Options Window Help

```
blished data Successfully: %s {'level': 94,
blished data Successfully: %s {'level': 90,
blished data Successfully: %s {'level': 97,
blished data Successfully: %s {'level': 72,
blished data Successfully: %s {'level': 57,
blished data Successfully: %s {'level': 48,
blished data Successfully: %s {'level': 69,
blished data Successfully: %s {'level': 64,
blished data Successfully: %s {'level': 10,
blished data Successfully: %s {'level': 50,
blished data Successfully: %s {'level': 78,
blished data Successfully: %s {'level': 5,
blished data Successfully: %s {'level': 8,
blished data Successfully: %s {'level': 2,
blished data Successfully: %s {'level': 14,
blished data Successfully: %s {'level': 86,
blished data Successfully: %s {'level': 95,
blished data Successfully: %s {'level': 36,
blished data Successfully: %s {'level': 89,
blished data Successfully: %s {'level': 15,
blished data Successfully: %s {'level': 78,
blished data Successfully: %s {'level': 93,
blished data Successfully: %s {'level': 83,
blished data Successfully: %s {'level': 91,
blished data Successfully: %s {'level': 52,
blished data Successfully: %s {'level': 95,
blished data Successfully: %s {'level': 58,
blished data Successfully: %s {'level': 37,
blished data Successfully: %s {'level': 33,
blished data Successfully: %s {'level': 51,
blished data Successfully: %s {'level': 32,
blished data Successfully: %s {'level': 88, 'intensity': 30}
blished data Successfully: %s {'level': 31, 'intensity': 27}
blished data Successfully: %s {'level': 94, 'intensity': 27}
blished data Successfully: %s {'level': 75, 'intensity': 62}
blished data Successfully: %s {'level': 53, 'intensity': 25}
blished data Successfully: %s {'level': 56, 'intensity': 48}
blished data Successfully: %s {'level': 0, 'intensity': 8}
blished data Successfully: %s {'level': 3, 'intensity': 80}
```

Ln: 55 Col: 0

Assignment-3

Water Level

3

%

Light Intensity

80

%

-hjvlk4dnzc
token: a?PvyLbE_IC9H8B)fT

Web UI: