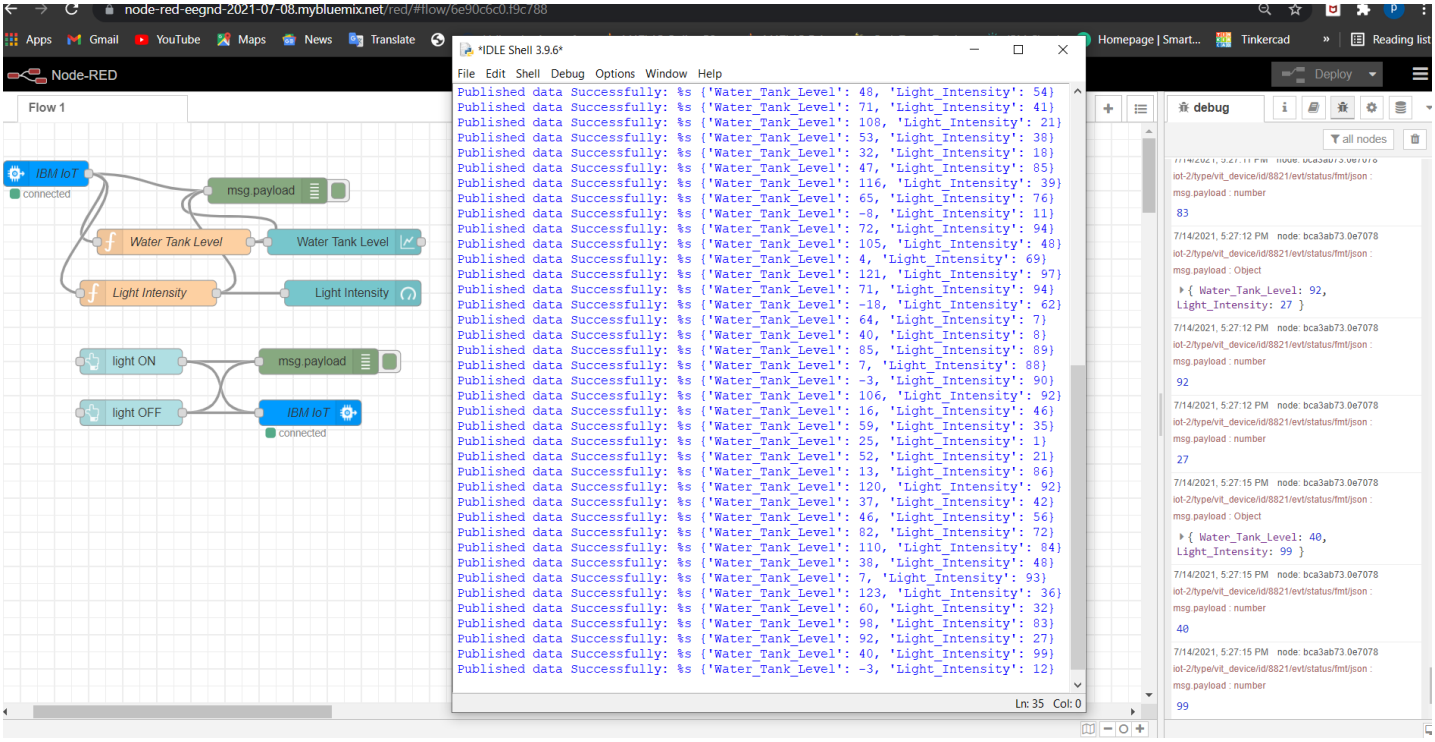
ASSIGNMENT 3

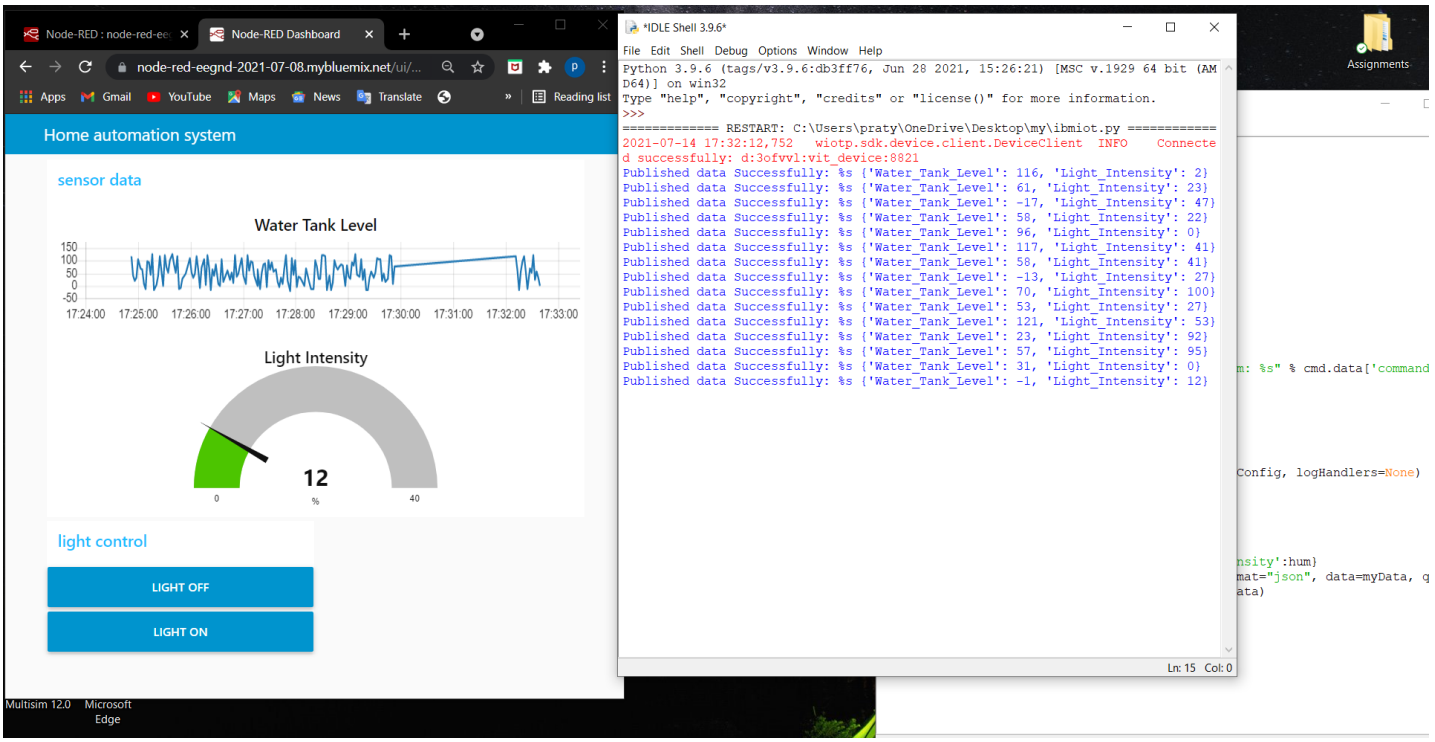
CODE

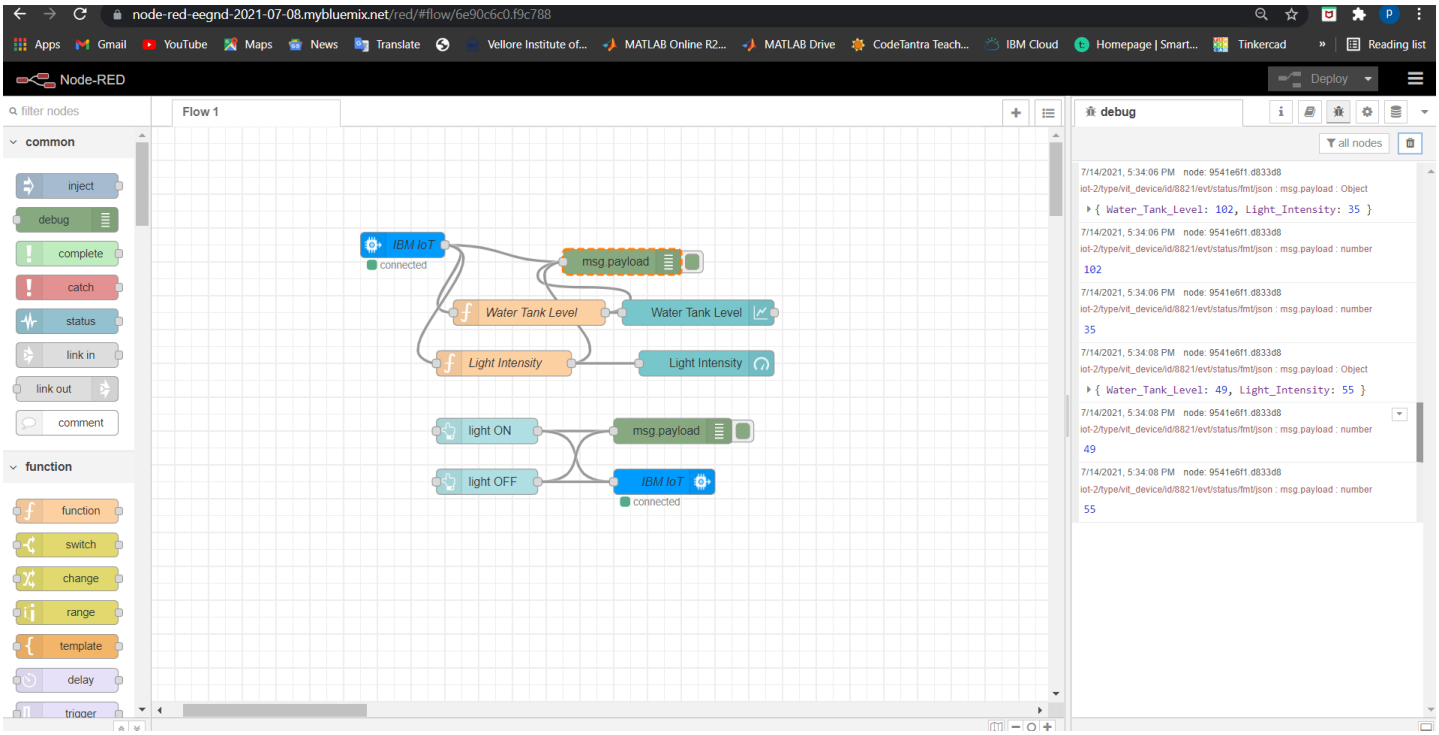
```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "3ofvvl",
        "typeId": "vit_device",
        "deviceId":"8821"
    },
    "auth": {
        "token": "123jmpNDA25"
    }
}


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:
```

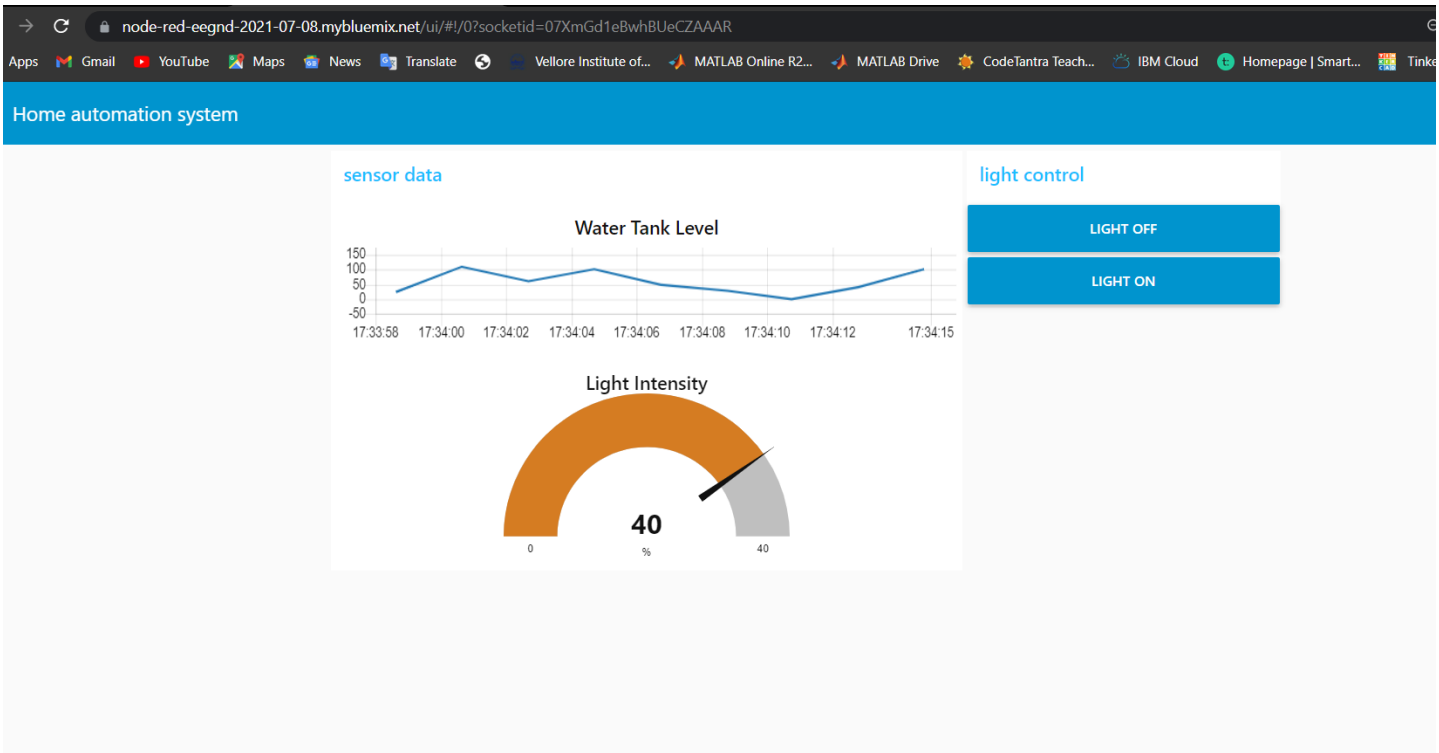
```
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'Water_Tank_Level':temp, 'Light_Intensity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

SCREENSHOTS


node-red-eegnd-2021-07-08.mybluemix.net/red/#flow/6e90c6c0.f9c788
Node-RED
Flow 1
Deploy
IBM IoT
connected
msg.payload
Water Tank Level
Water Tank Level
Light Intensity
Light Intensity
light ON
msg.payload
light OFF
IBM IoT
connected
debug
all nodes
IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
Published data Successfully: %s {'Water_Tank_Level': 48, 'Light_Intensity': 54}
Published data Successfully: %s {'Water_Tank_Level': 71, 'Light_Intensity': 41}
Published data Successfully: %s {'Water_Tank_Level': 108, 'Light_Intensity': 21}
Published data Successfully: %s {'Water_Tank_Level': 53, 'Light_Intensity': 38}
Published data Successfully: %s {'Water_Tank_Level': 32, 'Light_Intensity': 18}
Published data Successfully: %s {'Water_Tank_Level': 47, 'Light_Intensity': 85}
Published data Successfully: %s {'Water_Tank_Level': 116, 'Light_Intensity': 39}
Published data Successfully: %s {'Water_Tank_Level': 65, 'Light_Intensity': 76}
Published data Successfully: %s {'Water_Tank_Level': -8, 'Light_Intensity': 11}
Published data Successfully: %s {'Water_Tank_Level': 72, 'Light_Intensity': 94}
Published data Successfully: %s {'Water_Tank_Level': 105, 'Light_Intensity': 48}
Published data Successfully: %s {'Water_Tank_Level': 4, 'Light_Intensity': 69}
Published data Successfully: %s {'Water_Tank_Level': 121, 'Light_Intensity': 97}
Published data Successfully: %s {'Water_Tank_Level': 71, 'Light_Intensity': 94}
Published data Successfully: %s {'Water_Tank_Level': -18, 'Light_Intensity': 62}
Published data Successfully: %s {'Water_Tank_Level': 64, 'Light_Intensity': 7}
Published data Successfully: %s {'Water_Tank_Level': 40, 'Light_Intensity': 8}
Published data Successfully: %s {'Water_Tank_Level': 85, 'Light_Intensity': 89}
Published data Successfully: %s {'Water_Tank_Level': 7, 'Light_Intensity': 88}
Published data Successfully: %s {'Water_Tank_Level': -3, 'Light_Intensity': 90}
Published data Successfully: %s {'Water_Tank_Level': 106, 'Light_Intensity': 92}
Published data Successfully: %s {'Water_Tank_Level': 16, 'Light_Intensity': 46}
Published data Successfully: %s {'Water_Tank_Level': 59, 'Light_Intensity': 35}
Published data Successfully: %s {'Water_Tank_Level': 25, 'Light_Intensity': 1}
Published data Successfully: %s {'Water_Tank_Level': 52, 'Light_Intensity': 21}
Published data Successfully: %s {'Water_Tank_Level': 13, 'Light_Intensity': 86}
Published data Successfully: %s {'Water_Tank_Level': 120, 'Light_Intensity': 92}
Published data Successfully: %s {'Water_Tank_Level': 37, 'Light_Intensity': 42}
Published data Successfully: %s {'Water_Tank_Level': 46, 'Light_Intensity': 56}
Published data Successfully: %s {'Water_Tank_Level': 82, 'Light_Intensity': 72}
Published data Successfully: %s {'Water_Tank_Level': 110, 'Light_Intensity': 84}
Published data Successfully: %s {'Water_Tank_Level': 38, 'Light_Intensity': 48}
Published data Successfully: %s {'Water_Tank_Level': 7, 'Light_Intensity': 93}
Published data Successfully: %s {'Water_Tank_Level': 123, 'Light_Intensity': 36}
Published data Successfully: %s {'Water_Tank_Level': 60, 'Light_Intensity': 32}
Published data Successfully: %s {'Water_Tank_Level': 98, 'Light_Intensity': 83}
Published data Successfully: %s {'Water_Tank_Level': 92, 'Light_Intensity': 27}
Published data Successfully: %s {'Water_Tank_Level': 40, 'Light_Intensity': 99}
Published data Successfully: %s {'Water_Tank_Level': -3, 'Light_Intensity': 12}
Ln: 35 Col: 0
7/14/2021, 5:27:12 PM node: bca3ab73.0e7078
msg.payload : number
83
7/14/2021, 5:27:12 PM node: bca3ab73.0e7078
msg.payload : Object
{ Water_Tank_Level: 92, Light_Intensity: 27 }
7/14/2021, 5:27:12 PM node: bca3ab73.0e7078
msg.payload : number
92
7/14/2021, 5:27:12 PM node: bca3ab73.0e7078
msg.payload : number
27
7/14/2021, 5:27:15 PM node: bca3ab73.0e7078
msg.payload : Object
{ Water_Tank_Level: 40, Light_Intensity: 99 }
7/14/2021, 5:27:15 PM node: bca3ab73.0e7078
msg.payload : number
40
7/14/2021, 5:27:15 PM node: bca3ab73.0e7078
msg.payload : number
99


Node-RED Dashboard
node-red-eegnd-2021-07-08.mybluemix.net/ui/...
Home automation system
sensor data
Water Tank Level
150
100
50
0
-50
17:24:00 17:25:00 17:26:00 17:27:00 17:28:00 17:29:00 17:30:00 17:31:00 17:32:00 17:33:00
Light Intensity
12
0
%
40
light control
LIGHT OFF
LIGHT ON
IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\praty\OneDrive\Desktop\my\ibmiot.py ==========
2021-07-14 17:32:12,752 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:3ofvvl:vit_device:8821
Published data Successfully: %s {'Water_Tank_Level': 116, 'Light_Intensity': 2}
Published data Successfully: %s {'Water_Tank_Level': 61, 'Light_Intensity': 23}
Published data Successfully: %s {'Water_Tank_Level': -17, 'Light_Intensity': 47}
Published data Successfully: %s {'Water_Tank_Level': 58, 'Light_Intensity': 22}
Published data Successfully: %s {'Water_Tank_Level': 96, 'Light_Intensity': 0}
Published data Successfully: %s {'Water_Tank_Level': 117, 'Light_Intensity': 41}
Published data Successfully: %s {'Water_Tank_Level': 58, 'Light_Intensity': 41}
Published data Successfully: %s {'Water_Tank_Level': -13, 'Light_Intensity': 27}
Published data Successfully: %s {'Water_Tank_Level': 70, 'Light_Intensity': 100}
Published data Successfully: %s {'Water_Tank_Level': 53, 'Light_Intensity': 27}
Published data Successfully: %s {'Water_Tank_Level': 121, 'Light_Intensity': 53}
Published data Successfully: %s {'Water_Tank_Level': 23, 'Light_Intensity': 92}
Published data Successfully: %s {'Water_Tank_Level': 57, 'Light_Intensity': 95}
Published data Successfully: %s {'Water_Tank_Level': 31, 'Light_Intensity': 0}
Published data Successfully: %s {'Water_Tank_Level': -1, 'Light_Intensity': 12}
Ln: 15 Col: 0
Assignments
Multisim 12.0
Microsoft Edge


node-red-eegnd-2021-07-08.mybluemix.net/red/#flow/6e90c6c0.f9c788
Node-RED
Deploy
Flow 1
debug
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
switch
change
range
template
delay
IBM IoT
connected
msg.payload
Water Tank Level
Water Tank Level
Light Intensity
Light Intensity
light ON
light OFF
msg.payload
IBM IoT
connected
7/14/2021, 5:34:06 PM node: 9541e6f1.d833d8
iot-2/type/vit_device/id/8821/evt/status/fmt/json : msg.payload : Object
{ Water_Tank_Level: 102, Light_Intensity: 35 }
7/14/2021, 5:34:06 PM node: 9541e6f1.d833d8
iot-2/type/vit_device/id/8821/evt/status/fmt/json : msg.payload : number
102
7/14/2021, 5:34:06 PM node: 9541e6f1.d833d8
iot-2/type/vit_device/id/8821/evt/status/fmt/json : msg.payload : number
35
7/14/2021, 5:34:08 PM node: 9541e6f1.d833d8
iot-2/type/vit_device/id/8821/evt/status/fmt/json : msg.payload : Object
{ Water_Tank_Level: 49, Light_Intensity: 55 }
7/14/2021, 5:34:08 PM node: 9541e6f1.d833d8
iot-2/type/vit_device/id/8821/evt/status/fmt/json : msg.payload : number
49
7/14/2021, 5:34:08 PM node: 9541e6f1.d833d8
iot-2/type/vit_device/id/8821/evt/status/fmt/json : msg.payload : number
55


node-red-eegnd-2021-07-08.mybluemix.net/ui/#!/0?socketid=07XmGd1eBwhBUeCZAAAR
Home automation system
sensor data
Water Tank Level
150
100
50
0
-50
17:33:58
17:34:00
17:34:02
17:34:04
17:34:06
17:34:08
17:34:10
17:34:12
17:34:15
Light Intensity
40
%
0
40
light control
LIGHT OFF
LIGHT ON