

Assignment 3

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REGISTRATION NUMBER: 19BEI0130

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:

```
assignment3.py - C:\Users\Jiya\OneDrive\Desktop\IoT externship\assignment3.py (3.9.6)
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import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "e8u8jp",
        "typeId": "VIITdevice",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    if(m=="lighton"):
        print("LIGHT ON")
    elif (m=="lightoff"):
        print("LIGHT OFF");
    elif(m=="tapopen"):
        print("WATER TAP OPEN")
    elif(m=="tapclose"):
        print("WATER TAP CLOSED")

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

while True:
    level=random.randint(-20,125)
    intensity=random.randint(0,100)
    myData={'water_tank_level':level, 'light_intensity':intensity}
    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()
```

```

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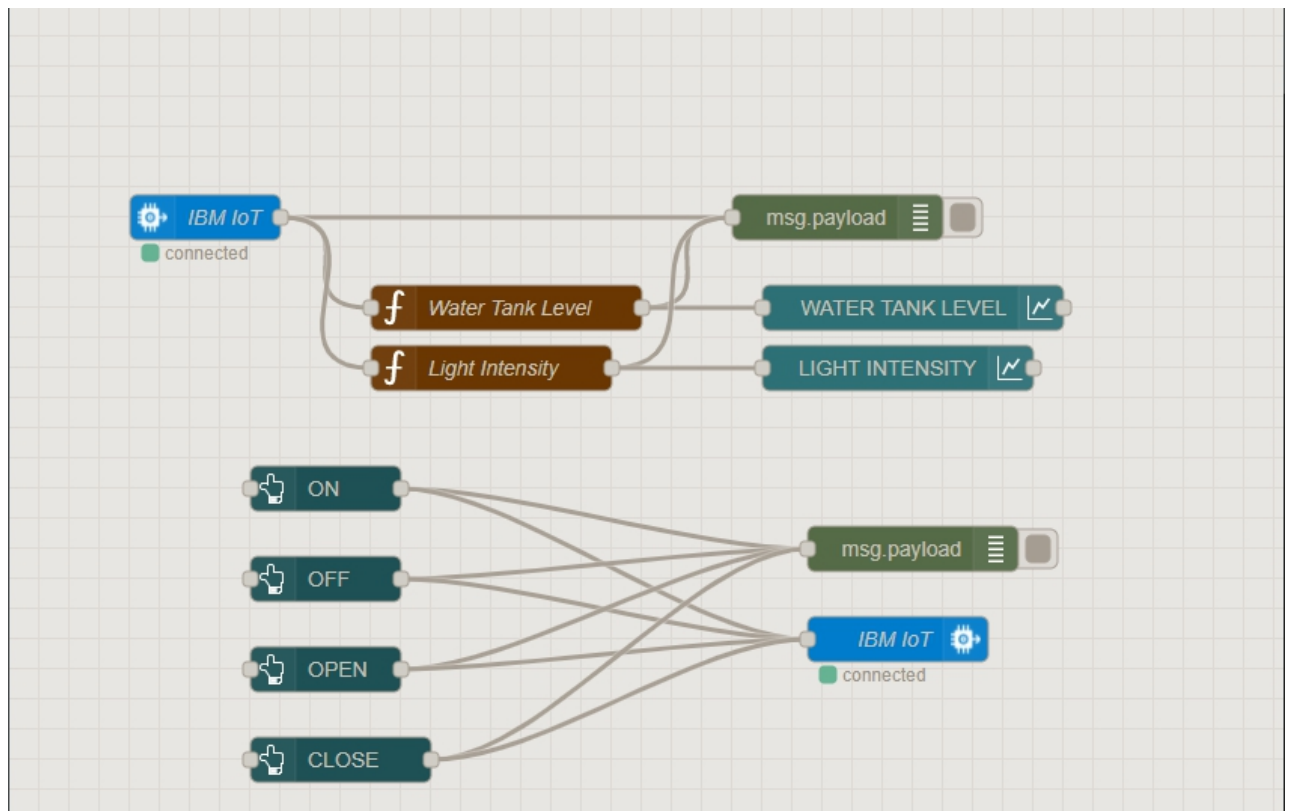
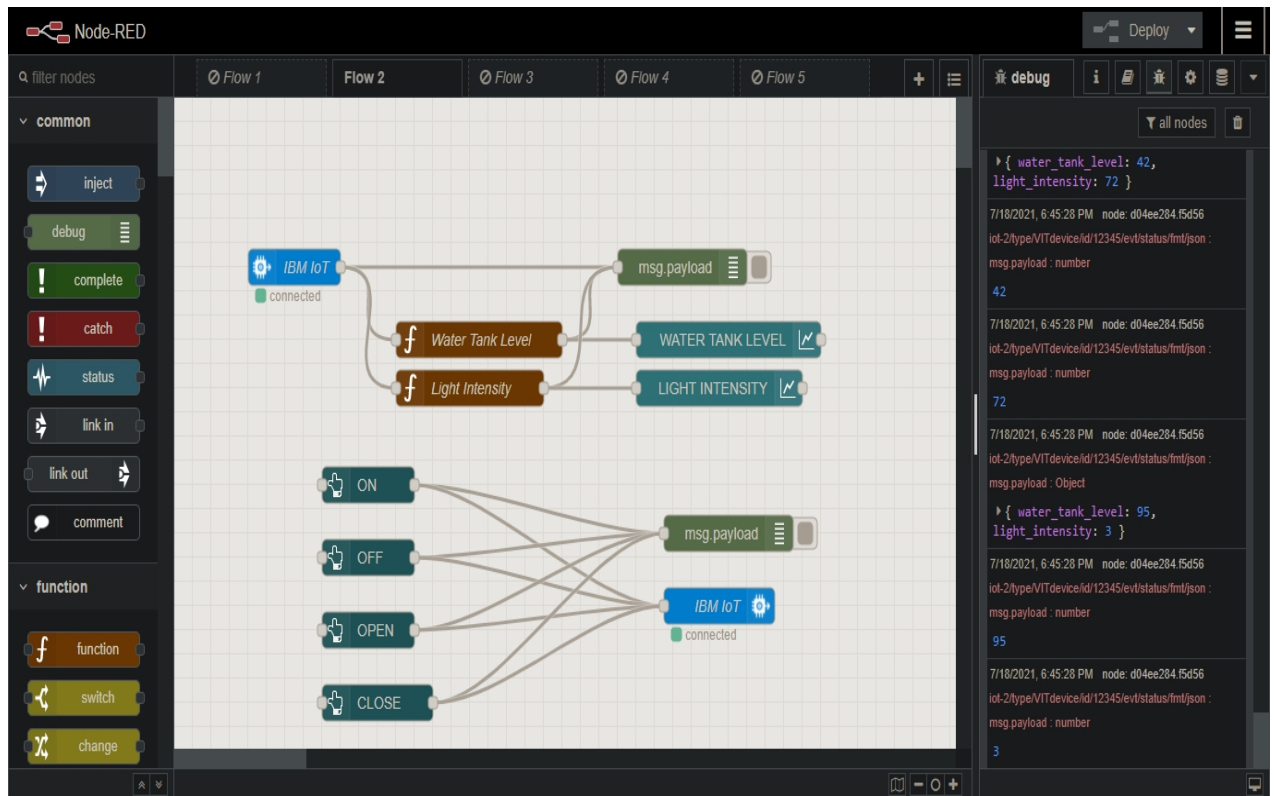
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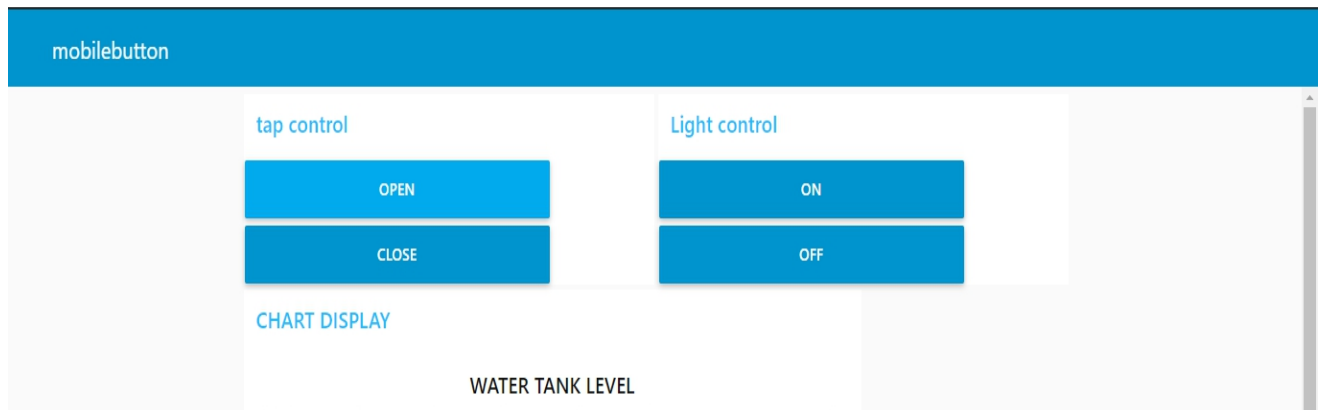
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Node Red



Web UI



Python shell

IDLE Shell 3.9.6

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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\Jiya\OneDrive\Desktop\IoT externship\assignment3.py =====

2021-07-18 18:44:45,459 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:e8u8jp:VITdevice:12345

Published data Successfully: %s {'water_tank_level': 6, 'light_intensity': 18}

Published data Successfully: %s {'water_tank_level': 37, 'light_intensity': 4}

Published data Successfully: %s {'water_tank_level': 93, 'light_intensity': 59}

Message received from IBM IoT Platform: tapopen

WATER TAP OPEN

Published data Successfully: %s {'water_tank_level': 28, 'light_intensity': 18}

Message received from IBM IoT Platform: lighton

LIGHT ON

Message received from IBM IoT Platform: tapclose

WATER TAP CLOSED

Published data Successfully: %s {'water_tank_level': 56, 'light_intensity': 36}

Message received from IBM IoT Platform: lightoff

LIGHT OFF

Published data Successfully: %s {'water_tank_level': 68, 'light_intensity': 46}

Published data Successfully: %s {'water_tank_level': 84, 'light_intensity': 18}

Published data Successfully: %s {'water_tank_level': 119, 'light_intensity': 43}

Published data Successfully: %s {'water_tank_level': 79, 'light_intensity': 75}

Message received from IBM IoT Platform: tapopen

WATER TAP OPEN

Published data Successfully: %s {'water_tank_level': 7, 'light_intensity': 72}

Message received from IBM IoT Platform: tapclose

WATER TAP CLOSED

Message received from IBM IoT Platform: tapopen

WATER TAP OPEN

Message received from IBM IoT Platform: lighton

LIGHT ON

Published data Successfully: %s {'water_tank_level': 31, 'light_intensity': 74}

Message received from IBM IoT Platform: lightoff

LIGHT OFF

Message received from IBM IoT Platform: lighton

LIGHT ON

Published data Successfully: %s {'water_tank_level': -12, 'light_intensity': 2}

Message received from IBM IoT Platform: tapclose

WATER TAP CLOSED

Message received from IBM IoT Platform: lightoff

LIGHT OFF