SmartBridge Externship Program

Internet of Things

Assignment 3

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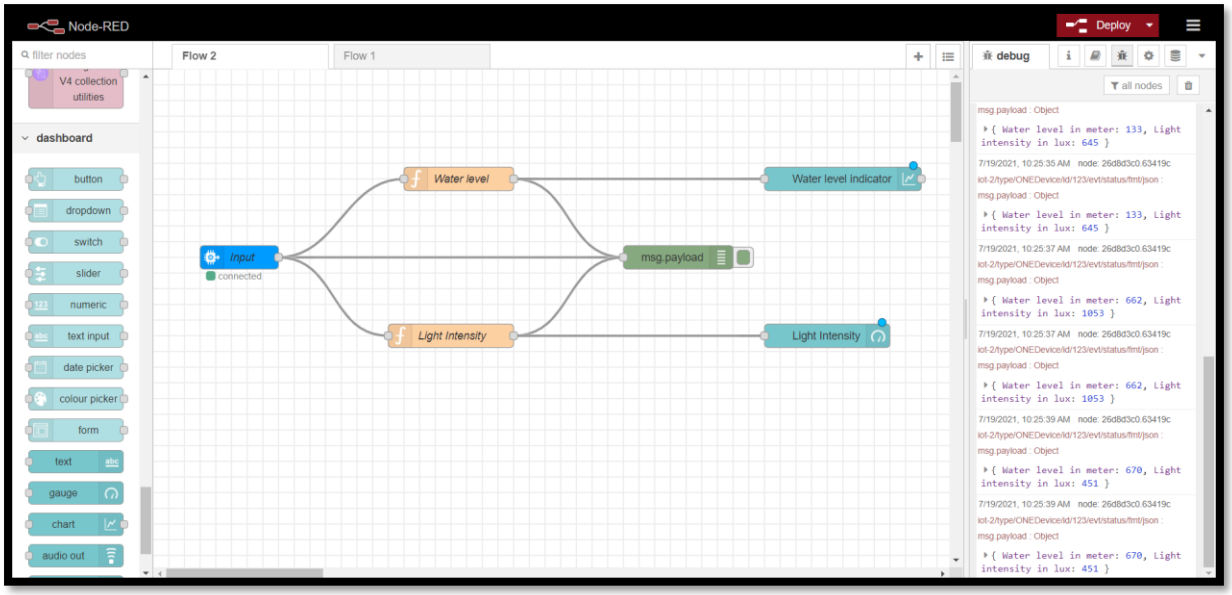
Develop a code to upload the water tank level and light intensity values to the IBM IoT platform and visualize them in the web application.

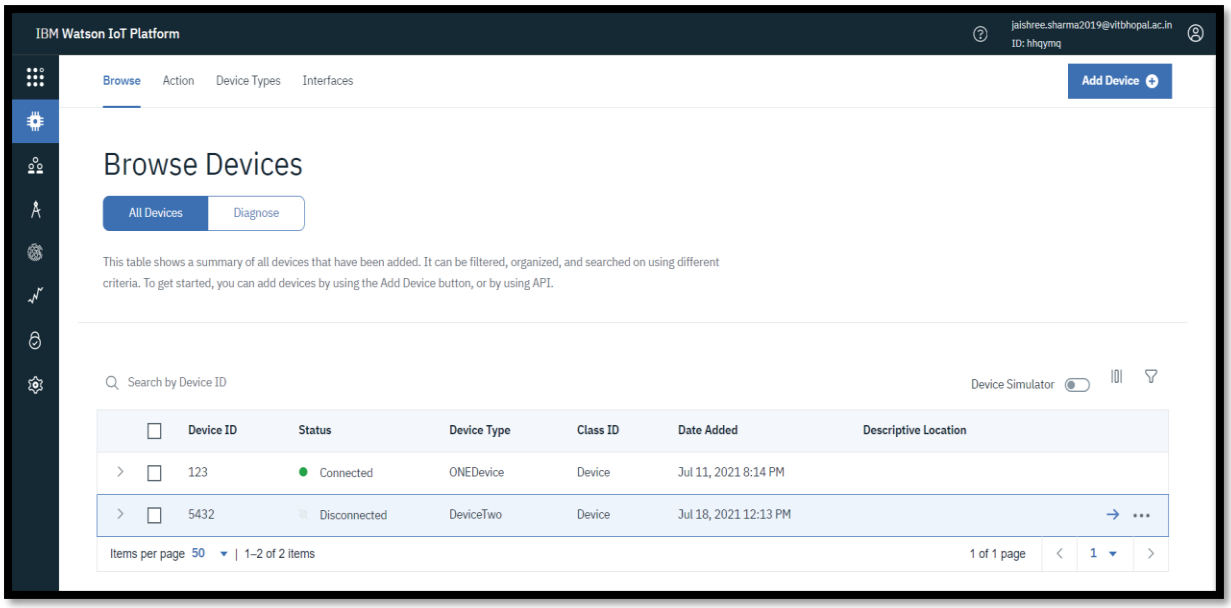
Code:

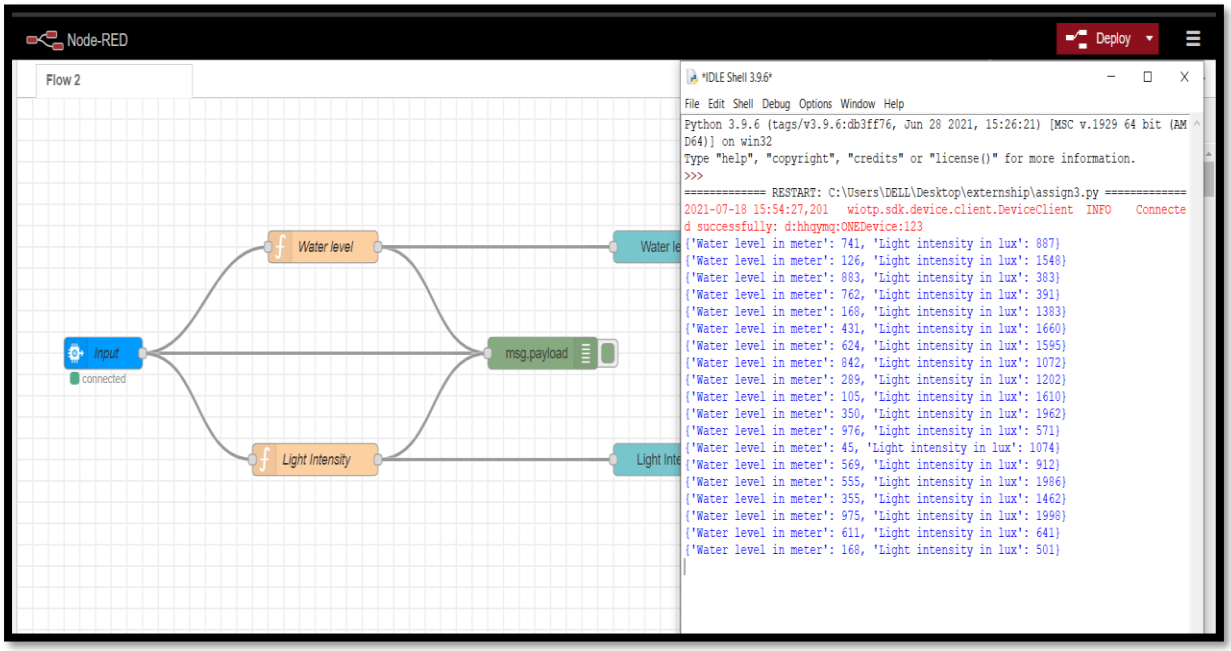
```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "hhqymq",
        "typeId": "ONEDevice",
        "deviceId":"123"
    },
    "auth": {
        "token": "12345678"
    }
}

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()
```

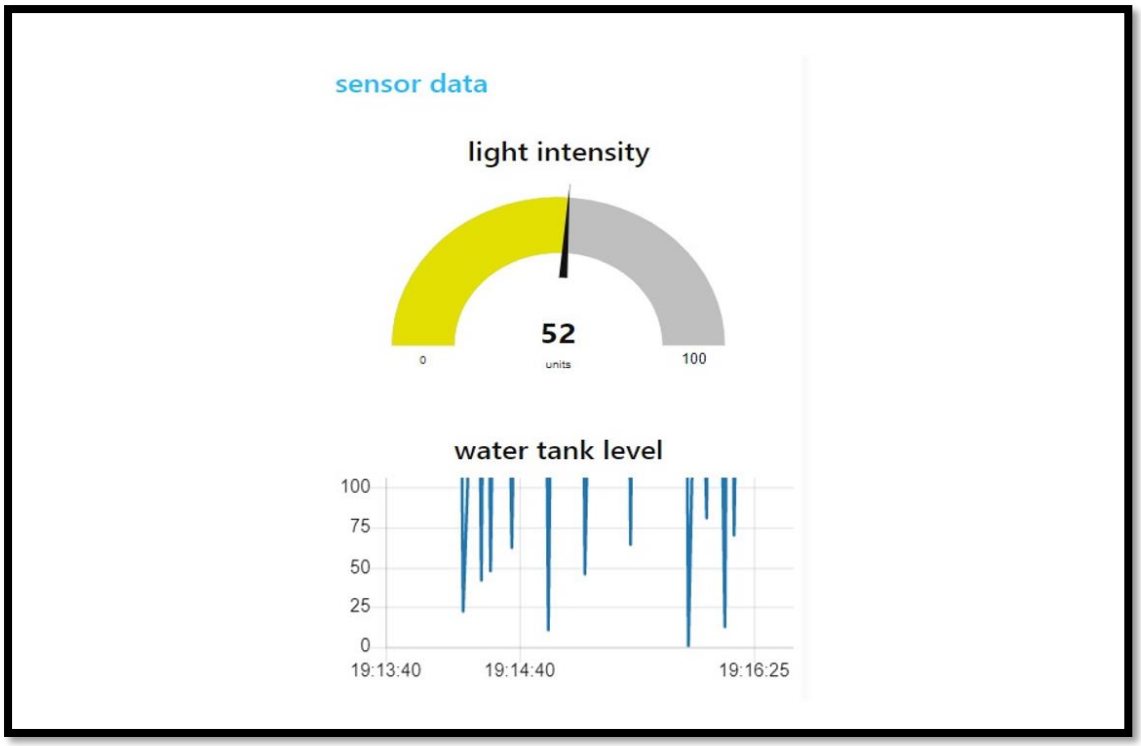
```
while True:
    water=random.randint(0,1000)
    intensity=random.randint(100,2000)
    myData={'Water level in meter':water, 'Light intensity in lux':intensity}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
    print(myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

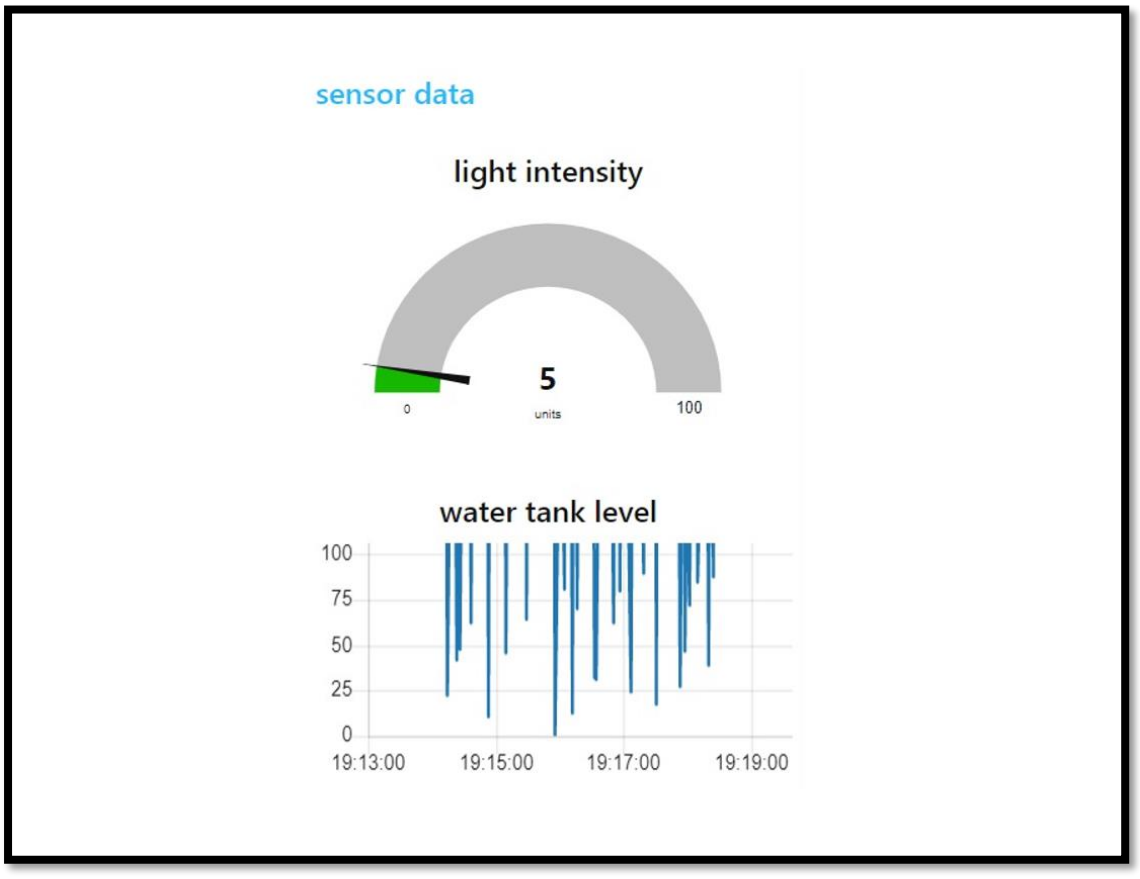
Output:




IBM Watson IoT Platform
jaishree.sharma2019@vitbhopal.ac.in
ID: hhqymq
Browse
Action
Device Types
Interfaces
Add Device
Browse Devices
All Devices
Diagnose
This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
123
Connected
ONEDevice
Device
Jul 11, 2021 8:14 PM
5432
Disconnected
DeviceTwo
Device
Jul 18, 2021 12:13 PM
Items per page 50
1–2 of 2 items
1 of 1 page
1


Node-RED
Deploy
Flow 2
Water level
Water le
Input
connected
msg.payload
Light Intensity
Light Inte
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\DELL\Desktop\externship\assign3.py ==========
2021-07-18 15:54:27,201 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:hhqymq:ONEDevice:123
{'Water level in meter': 741, 'Light intensity in lux': 887}
{'Water level in meter': 126, 'Light intensity in lux': 1548}
{'Water level in meter': 883, 'Light intensity in lux': 383}
{'Water level in meter': 762, 'Light intensity in lux': 391}
{'Water level in meter': 168, 'Light intensity in lux': 1383}
{'Water level in meter': 431, 'Light intensity in lux': 1660}
{'Water level in meter': 624, 'Light intensity in lux': 1595}
{'Water level in meter': 842, 'Light intensity in lux': 1072}
{'Water level in meter': 289, 'Light intensity in lux': 1202}
{'Water level in meter': 105, 'Light intensity in lux': 1610}
{'Water level in meter': 350, 'Light intensity in lux': 1962}
{'Water level in meter': 976, 'Light intensity in lux': 571}
{'Water level in meter': 45, 'Light intensity in lux': 1074}
{'Water level in meter': 569, 'Light intensity in lux': 912}
{'Water level in meter': 555, 'Light intensity in lux': 1986}
{'Water level in meter': 355, 'Light intensity in lux': 1462}
{'Water level in meter': 975, 'Light intensity in lux': 1998}
{'Water level in meter': 611, 'Light intensity in lux': 641}
{'Water level in meter': 168, 'Light intensity in lux': 501}


sensor data
light intensity
52
units
0
100
water tank level
100
75
50
25
0
19:13:40
19:14:40
19:16:25


sensor data
light intensity
5
units
0
100
water tank level
100
75
50
25
0
19:13:00
19:15:00
19:17:00
19:19:00