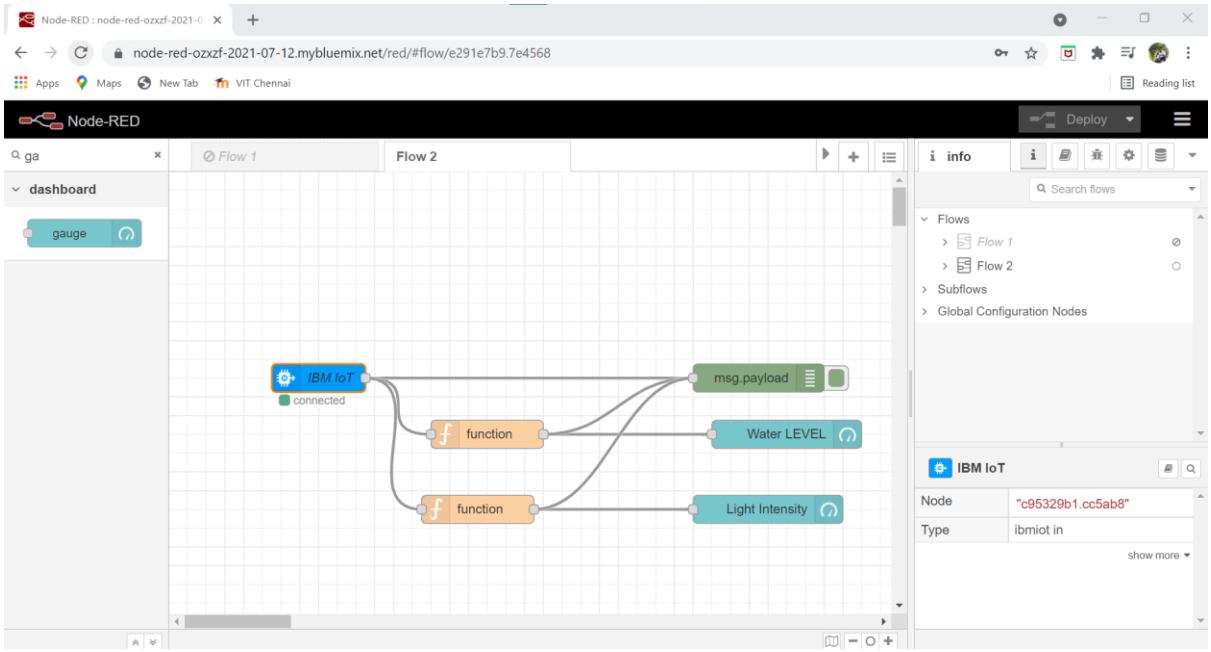
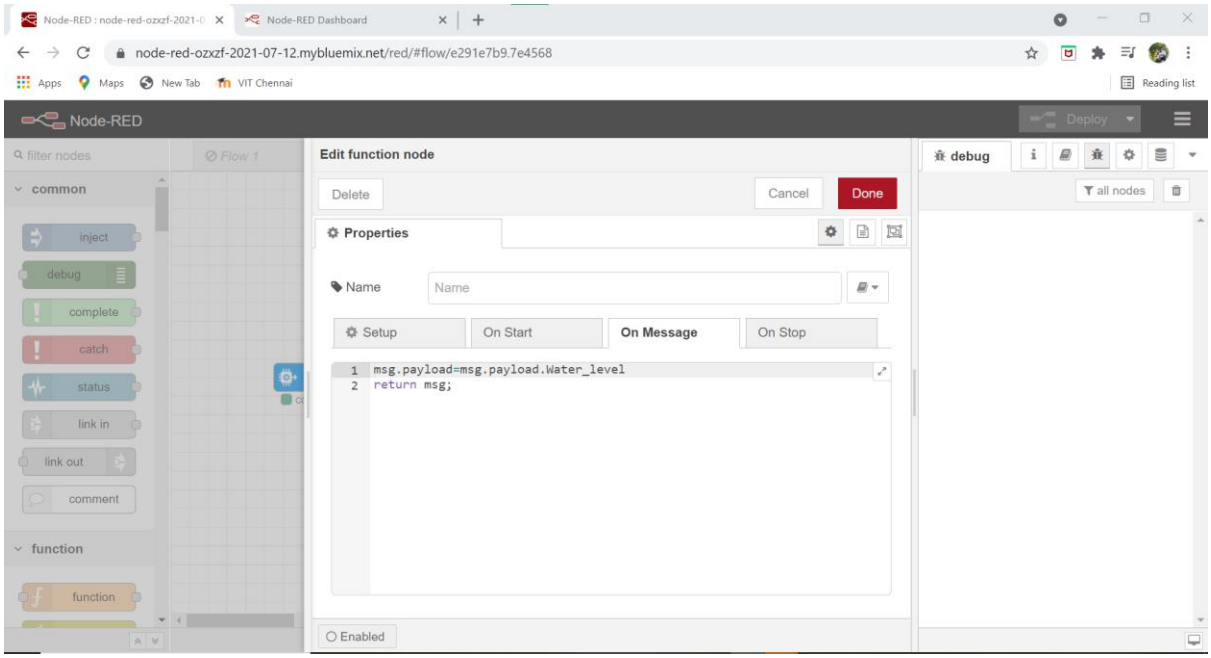
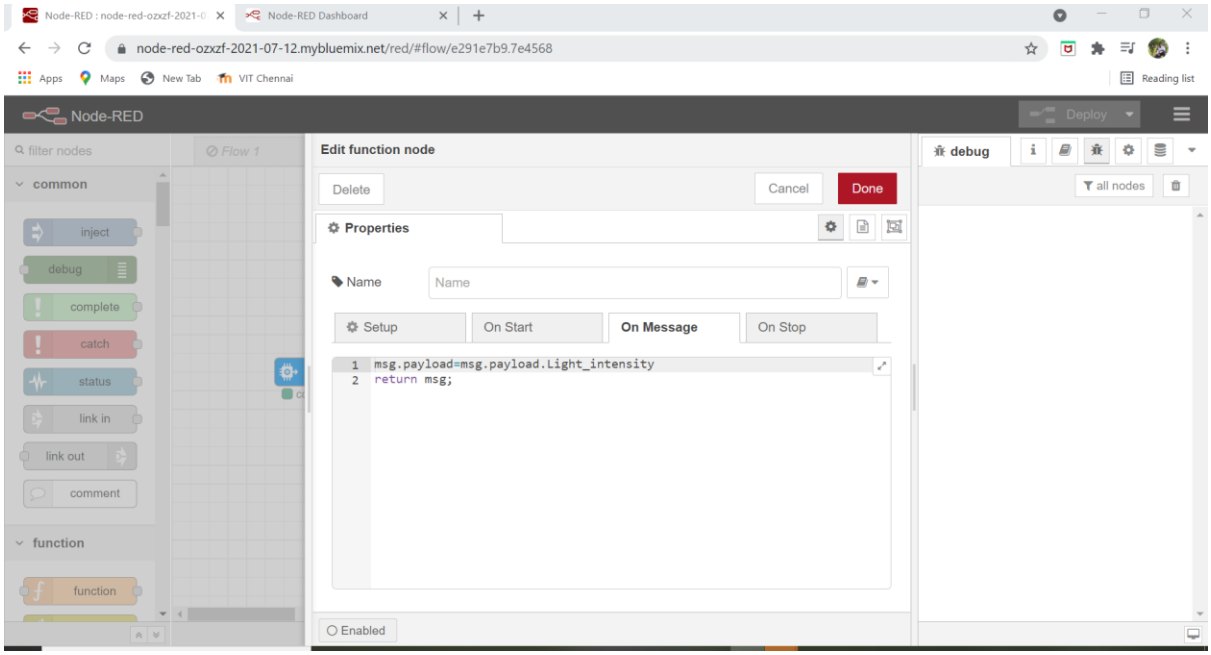
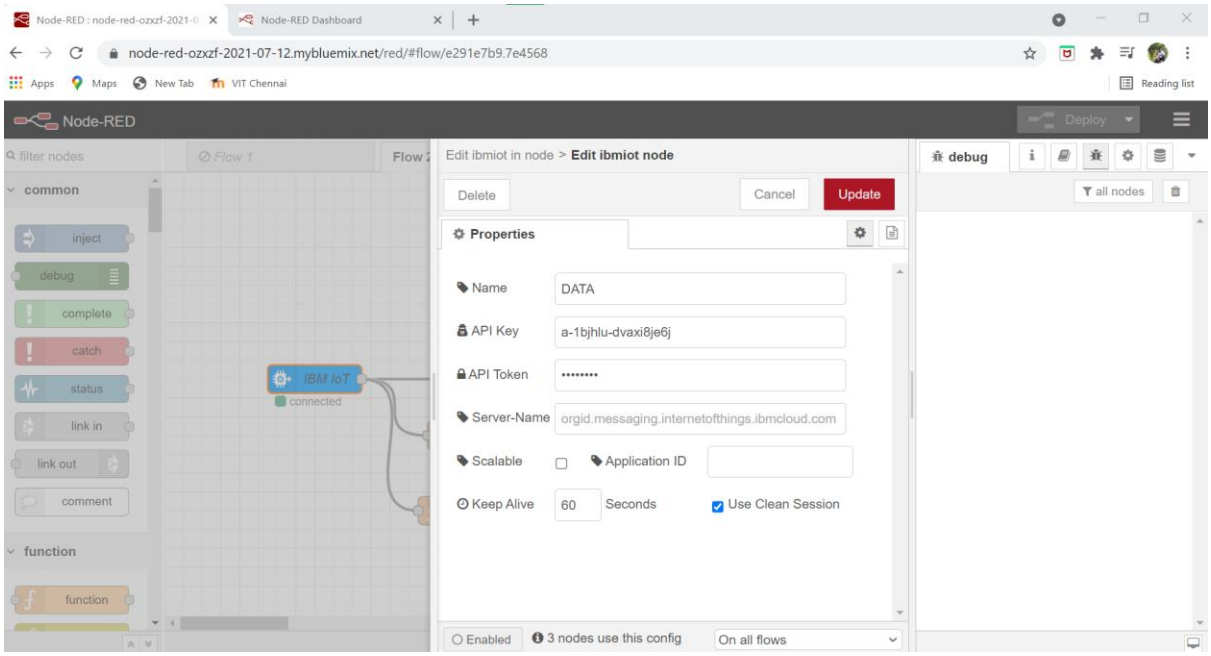
ASSIGNMENT_3:

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.






Node-RED : node-red-ozxzf-2021-0
Node-RED Dashboard
node-red-ozxzf-2021-07-12.mybluemix.net/red/#flow/e291e7b9.7e4568
Apps
Maps
New Tab
VIT Chennai
Reading list
Node-RED
Deploy
filter nodes
Flow 1
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
Edit function node
Delete
Cancel
Done
Properties
Name
Name
Setup
On Start
On Message
On Stop
1 msg.payload=msg.payload.Light_intensity
2 return msg;
Enabled
debug
all nodes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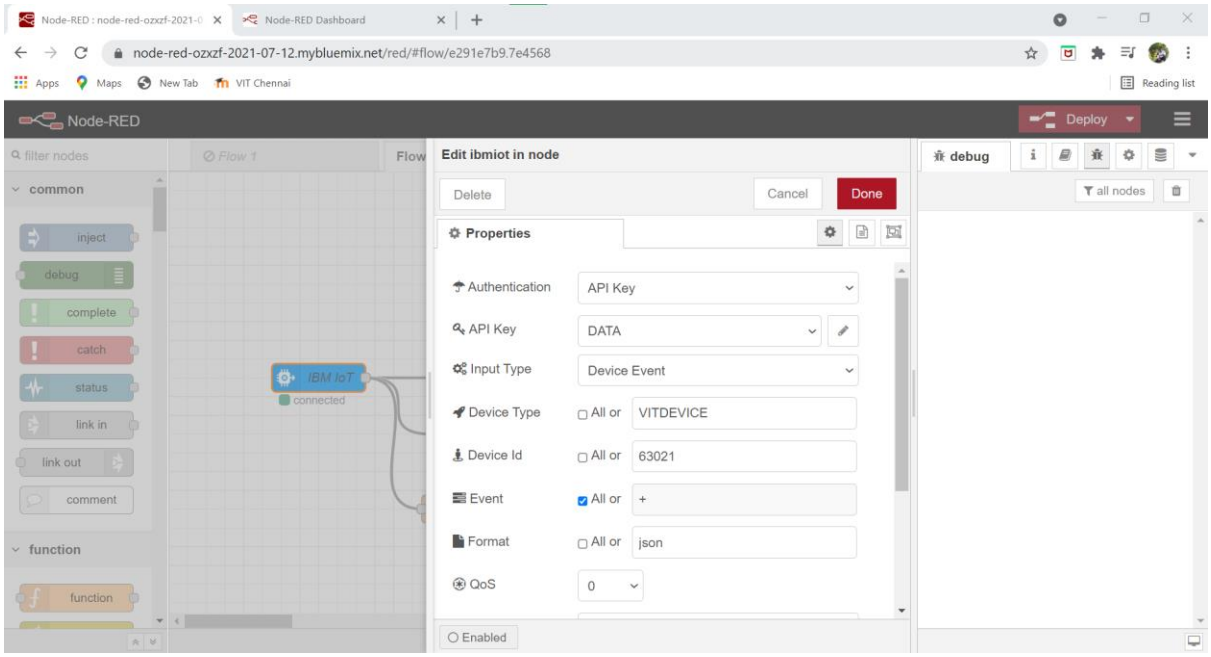
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
IBM IoT
connected
Edit ibmiot in node > Edit ibmiot node
Delete
Cancel
Update
Properties
Name
DATA
API Key
a-1bjhlu-dvaxi8je6j
API Token
Server-Name
orgid.messaging.internetofthings.ibmcloud.com
Scalable
Application ID
Keep Alive
60
Seconds
Use Clean Session
Enabled
3 nodes use this config
On all flows
debug
all nodes

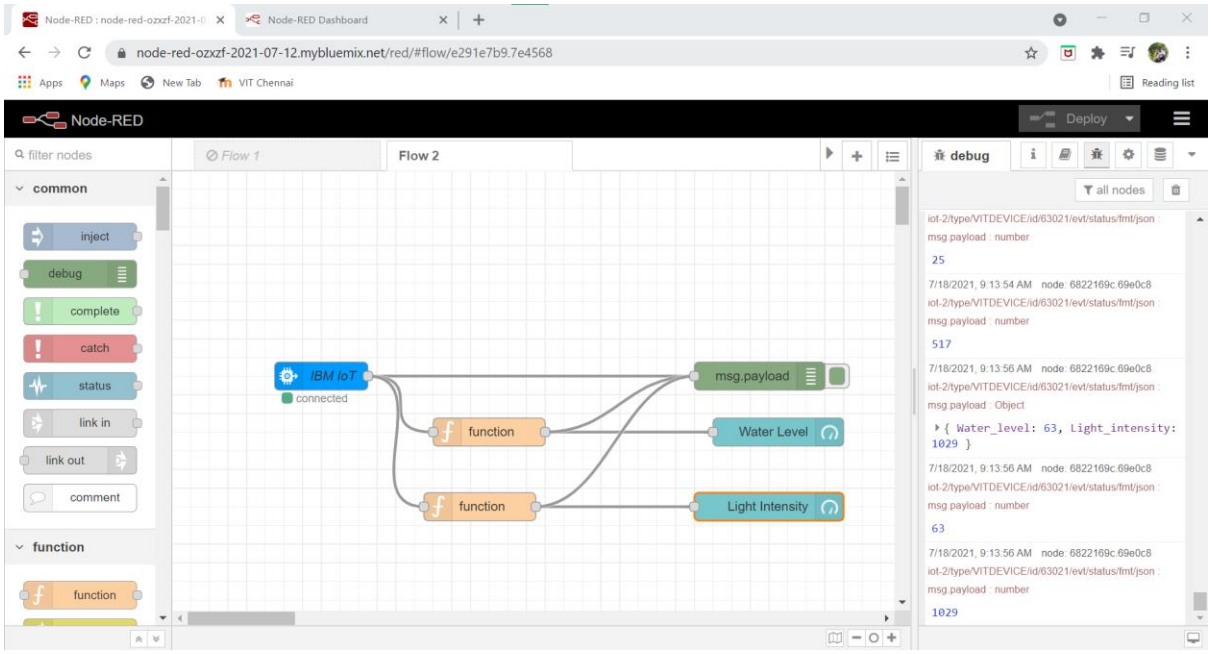


CODE:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "1bjhlu",
        "typeId": "VITDEVICE",
        "deviceId":"63021"
    },
    "auth": {
        "token": "9876543210"
    }
}


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:
    level=random.randint(0,10)
    intensity=random.randint(100,1500)
    myData={'level':level, '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()
```

AFTER STIMULATION:


Node-RED : node-red-ozxzf-2021-0
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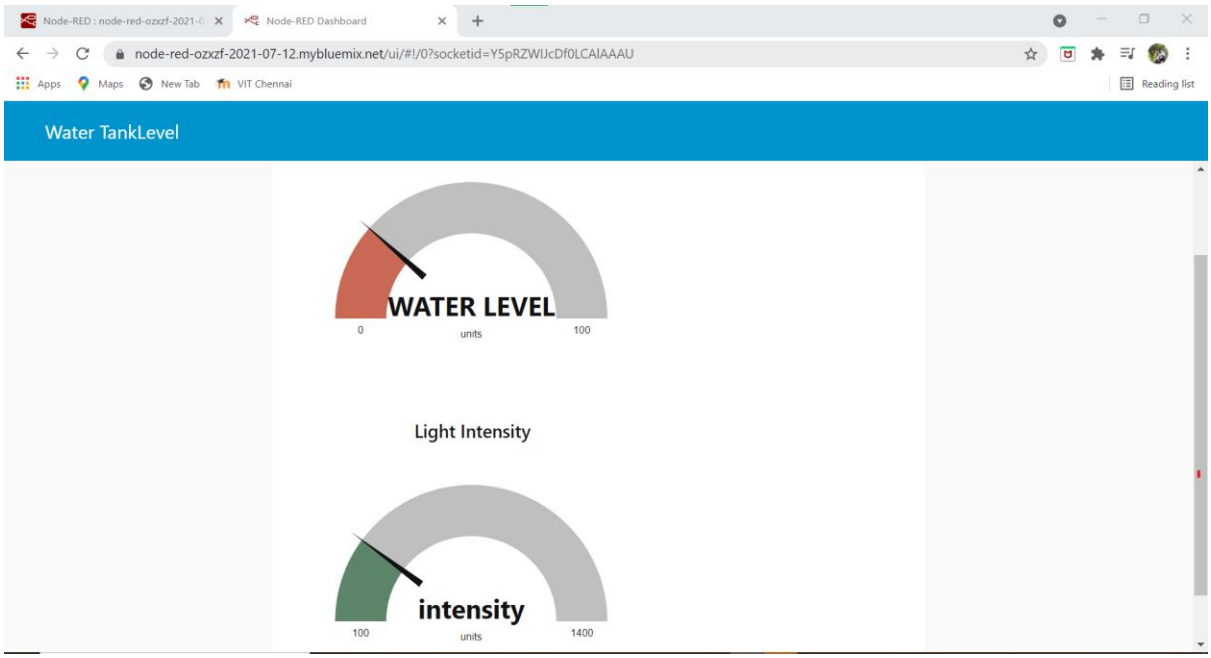
Reading list
Node-RED
Deploy
filter nodes
Flow 1
Flow 2
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
debug
all nodes
iot-2/type/VITDEVICE/id/63021/evt/status/fmt/json : msg.payload : number
25
7/18/2021, 9:13:54 AM node: 6822169c.69e0c8
iot-2/type/VITDEVICE/id/63021/evt/status/fmt/json : msg.payload : number
517
7/18/2021, 9:13:56 AM node: 6822169c.69e0c8
iot-2/type/VITDEVICE/id/63021/evt/status/fmt/json : msg.payload : Object
{ Water_level: 63, Light_intensity: 1029 }
7/18/2021, 9:13:56 AM node: 6822169c.69e0c8
iot-2/type/VITDEVICE/id/63021/evt/status/fmt/json : msg.payload : number
63
7/18/2021, 9:13:56 AM node: 6822169c.69e0c8
iot-2/type/VITDEVICE/id/63021/evt/status/fmt/json : msg.payload : number
1029
IBM IoT
connected
function
function
msg.payload
Water Level
Light Intensity


Node-RED : node-red-ozxzf-2021-0
Node-RED Dashboard
node-red-ozxzf-2021-07-12.mybluemix.net/ui/#!/0?socketid=Y5pRZWIJcDf0LCAlAAAU
Apps
Maps
New Tab
VIT Chennai
Reading list
Water TankLevel
WATER LEVEL
0
units
100
Light Intensity
intensity
100
units
1400