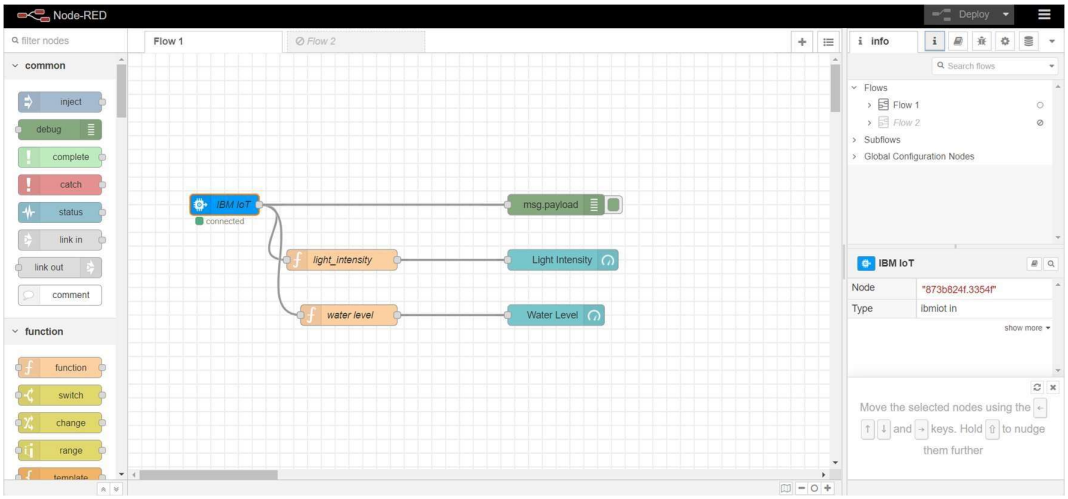
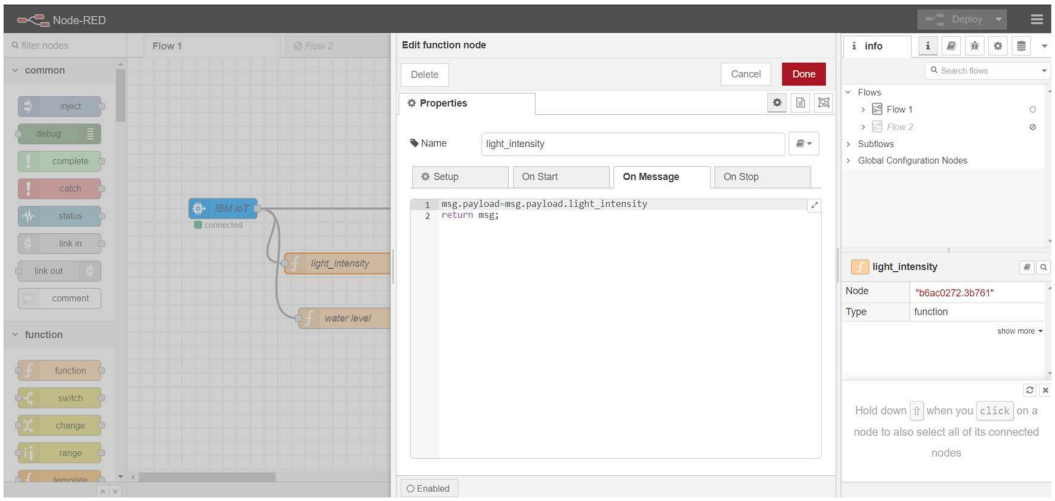
Name : G.Siva Naga Nihith

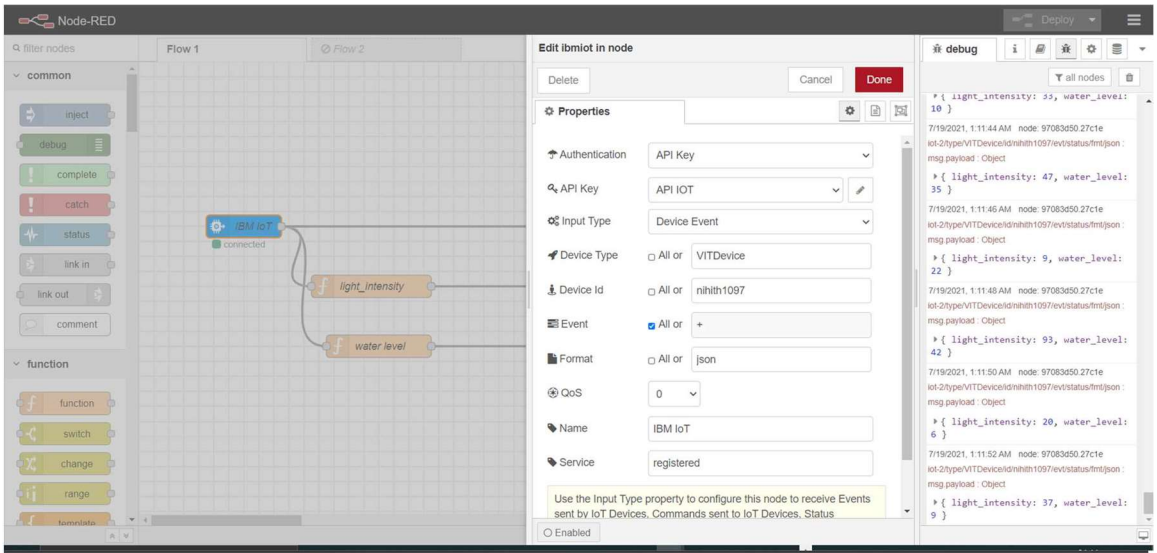
Reg.NO: 19BEC1097

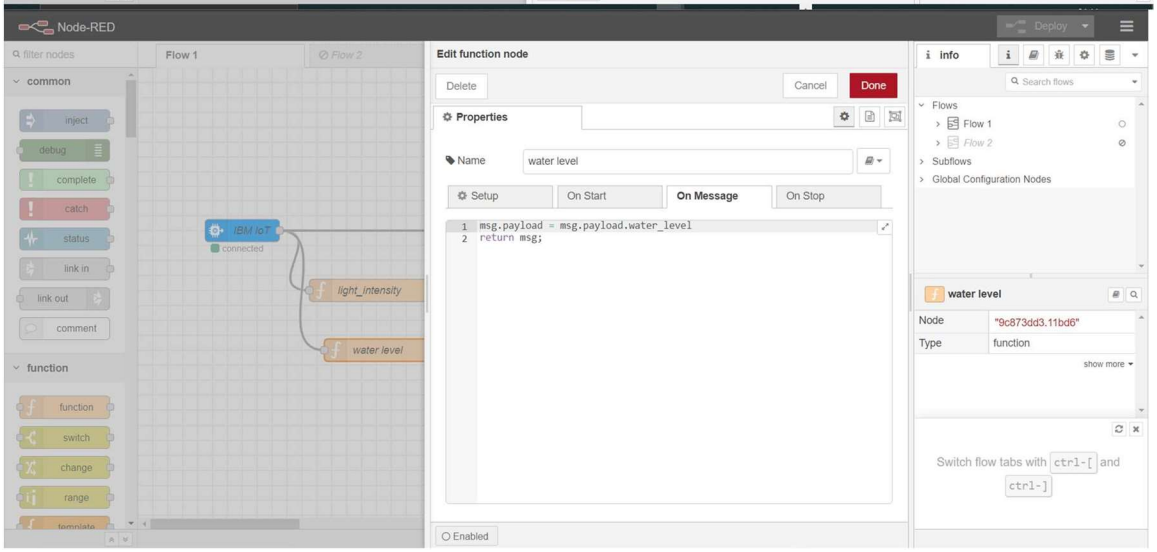
ASSIGNMENT 3:-

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
Deploy
filter nodes
Flow 1
Flow 2
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
switch
change
range
IBM IoT
connected
light_intensity
water level
Edit ibmiot in node
Delete
Cancel
Done
Properties
Authentication
API Key
API Key
API IOT
Input Type
Device Event
Device Type
All or
VITDevice
Device Id
All or
nihith1097
Event
All or
+
Format
All or
json
QoS
0
Name
IBM IoT
Service
registered
Use the Input Type property to configure this node to receive Events sent by IoT Devices, Commands sent to IoT Devices, Status
Enabled
debug
all nodes
{ light_intensity: 10 }
7/19/2021, 1:11:44 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 35 }
7/19/2021, 1:11:46 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 22 }
7/19/2021, 1:11:48 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 42 }
7/19/2021, 1:11:50 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 6 }
7/19/2021, 1:11:52 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 9 }


Node-RED
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filter nodes
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Flow 2
common
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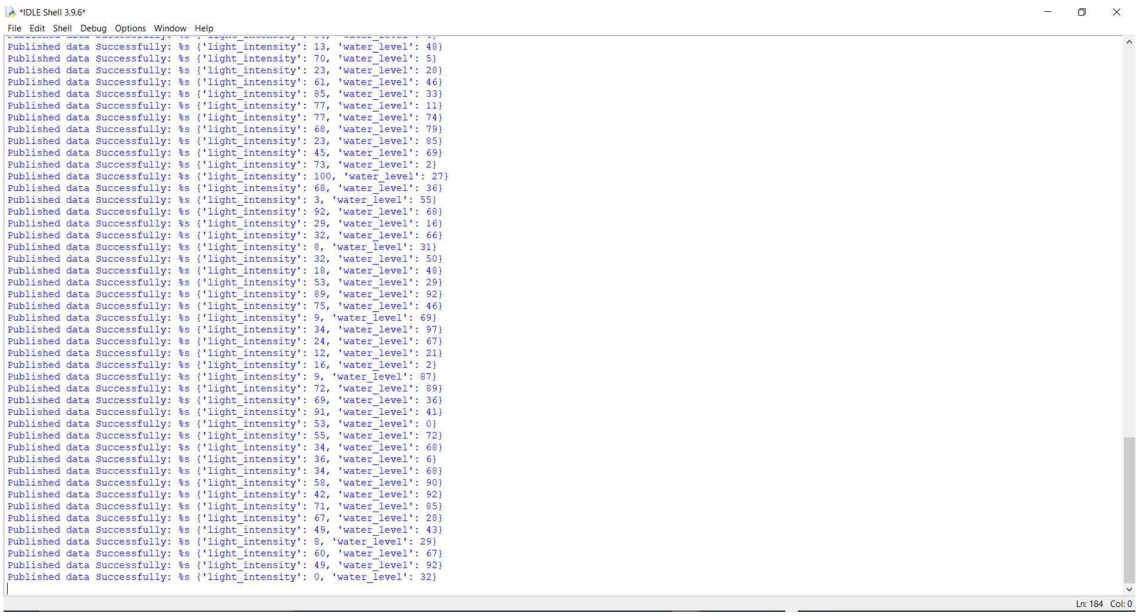
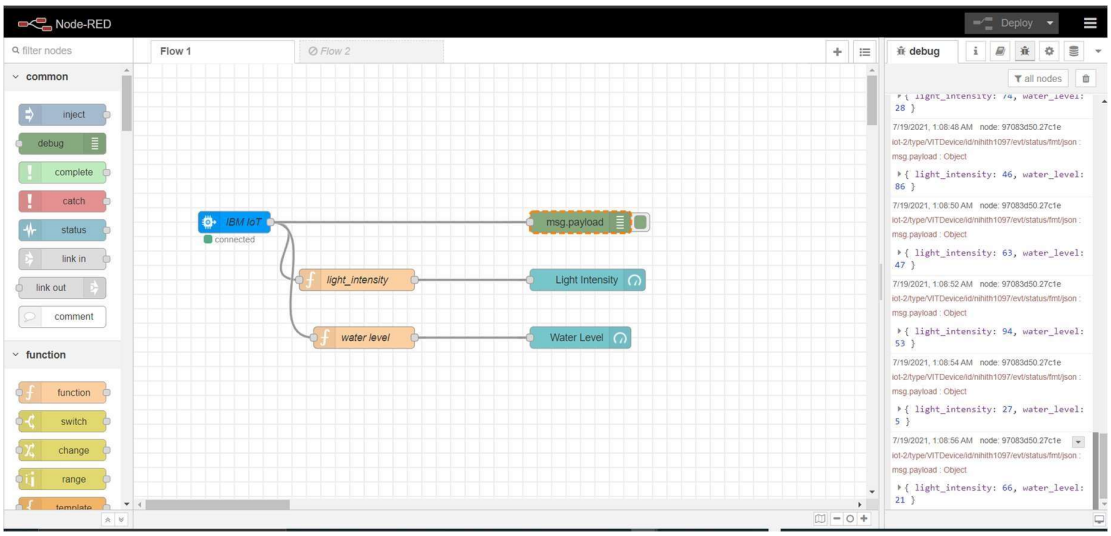
debug
complete
catch
status
link in
link out
comment
function
function
switch
change
range
IBM IoT
connected
light_intensity
water level
Edit function node
Delete
Cancel
Done
Properties
Name
water level
Setup
On Start
On Message
On Stop
1 msg.payload = msg.payload.water_level
2 return msg;
Enabled
info
Search flows
Flows
Flow 1
Flow 2
Subflows
Global Configuration Nodes
water level
Node
"9c873dd3.11bd6"
Type
function
show more
Switch flow tabs with ctrl-[and ctrl-]

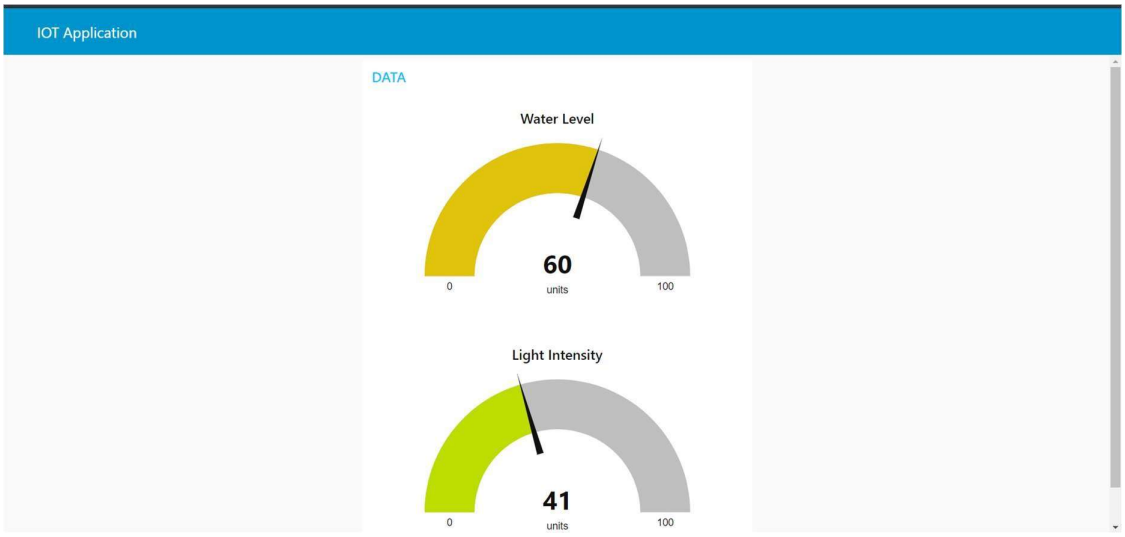
CODE:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "2rqk70",
        "typeId": "VITDevice",
        "deviceId":"nihith1097"
    },
    "auth": {
        "token": "nihith18"
    }
}

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:
    light_intensity=random.randint(0,100)
    water_level=random.randint(0,100)
    myData={'light_intensity':light_intensity,'water_level':water_level}
    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
Deploy
filter nodes
Flow 1
Flow 2
debug
all nodes
common
inject
debug
complete
catch
status
link in
link out
comment
function
function
switch
change
range
IBM IoT
connected
msg.payload
light_intensity
Light Intensity
water level
Water Level
7/19/2021, 1:08:48 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 46, water_level: 86 }
7/19/2021, 1:08:50 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 63, water_level: 47 }
7/19/2021, 1:08:52 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 94, water_level: 53 }
7/19/2021, 1:08:54 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 27, water_level: 5 }
7/19/2021, 1:08:56 AM node: 97083d50.27c1e
iot-2/type/VITDevice/id/nihith1097/evt/status/fmt/json : msg.payload : Object
{ light_intensity: 66, water_level: 21 }


IOT Application
DATA
Water Level
60
units
0
100
Light Intensity
41
units
0
100