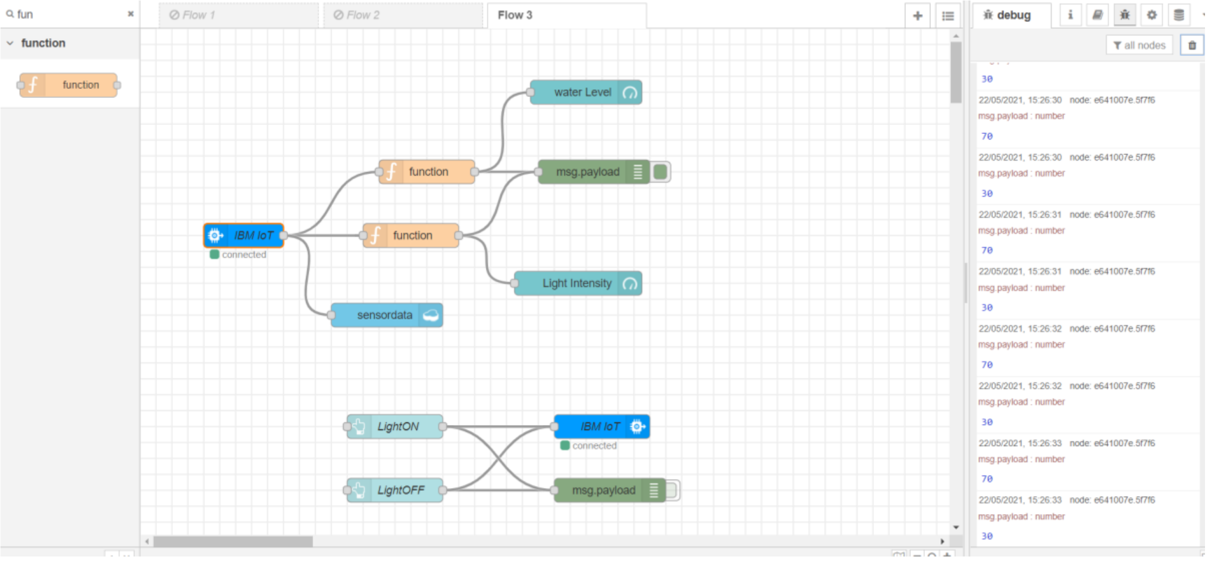
ASSIGNMENT-3

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.

Python code

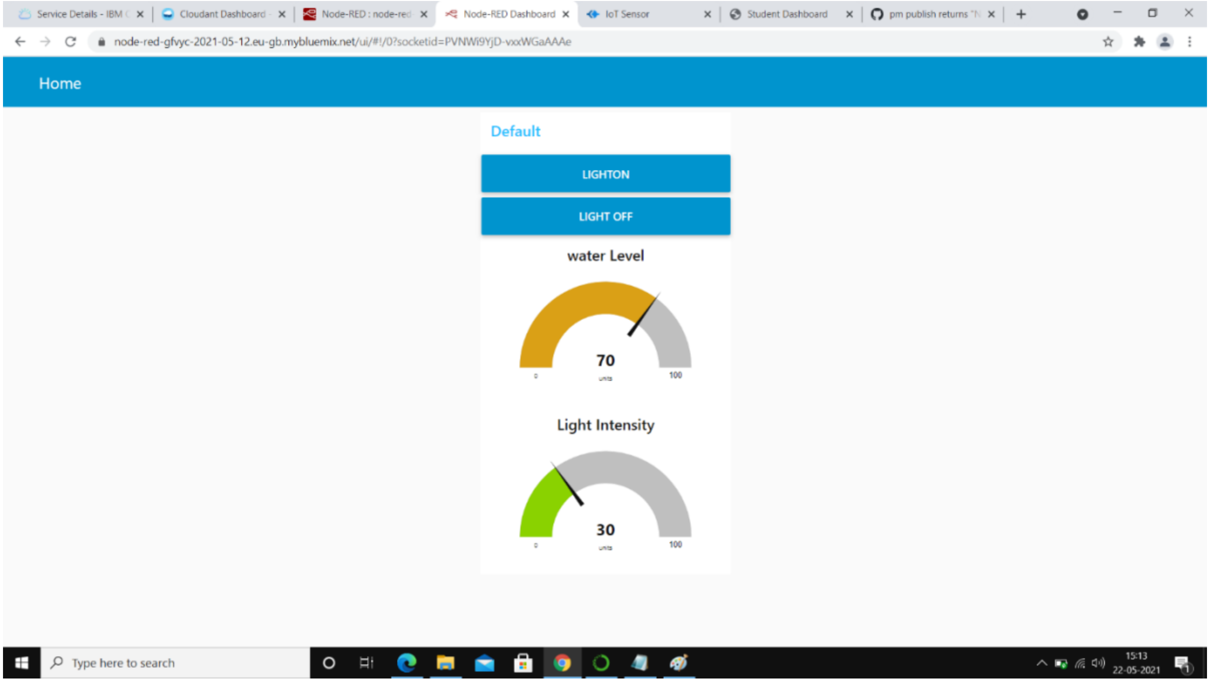
```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

import json

organization = "ci6mm1"

deviceType = "iotedevice"

deviceId = "1008"

authMethod = "token"

authToken = "7569767364"

w=0

l=0

def myCommandCallback(cmd):

    print("Command received: %s" % cmd.data['command'])

    if cmd.data['command']=='lighton':

        print("LIGHT ON IS RECEIVED")

    elif cmd.data['command']=='lightoff':

        print("LIGHT OFF IS RECEIVED")


    if cmd.command == "setInterval":

        if 'interval' not in cmd.data:

            print("Error - command is missing required information: 'interval'")

        else:
            interval = cmd.data['interval']
    elif cmd.command == "print":
        if 'message' not in cmd.data:
            print("Error - command is missing required information: 'message'")
        else:
            print(cmd.data['message'])
try:
      deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
      deviceCli = ibmiotf.device.Client(deviceOptions)
except Exception as e:
      print("Caught exception connecting device: %s" % str(e))
      sys.exit()
deviceCli.connect()
while True:
    w=70
    l=30
    data = {"d":{ 'waterlevel': w,'lightintensity': l}}
    #print data
    def myOnPublishCallback():
      print ("Published Waterlevel = %s %%"  %w, "Lightintensity = %s %%"  %l, "to IBM Watson")
    success = deviceCli.publishEvent("Data", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
      print("Not connected to IoTF")
    time.sleep(1)
    deviceCli.commandCallback = myCommandCallback
deviceCli.disconnect()
```

Node-RED blocks:



```
30
22/05/2021, 15:26:30   node: e641007e.5f7f6
msg.payload : number
70
22/05/2021, 15:26:30   node: e641007e.5f7f6
msg.payload : number
30
22/05/2021, 15:26:31   node: e641007e.5f7f6
msg.payload : number
70
22/05/2021, 15:26:31   node: e641007e.5f7f6
msg.payload : number
30
22/05/2021, 15:26:32   node: e641007e.5f7f6
msg.payload : number
70
22/05/2021, 15:26:32   node: e641007e.5f7f6
msg.payload : number
30
22/05/2021, 15:26:33   node: e641007e.5f7f6
msg.payload : number
70
22/05/2021, 15:26:33   node: e641007e.5f7f6
msg.payload : number
30
```

UI:



Service Details - IBM
Cloudant Dashboard
Node-RED : node-red
Node-RED Dashboard
IoT Sensor
Student Dashboard
pm publish returns
node-red-gfvyc-2021-05-12.eu-gb.mybluemix.net/ui/#!/0?socketid=PVNWi9YjD-vxxWGaAAAe
Home
Default
LIGHTON
LIGHT OFF
water Level
70
units
0
100
Light Intensity
30
units
0
100
Type here to search
15:13
22-05-2021