VIT EXTERNSHIP GUIDED PROJECTS

Name: Masetti Anil Kumar

Email: anil.18bcd7141@vitap.ac.in

Mobile no: 6300366825

Assignment No: 3

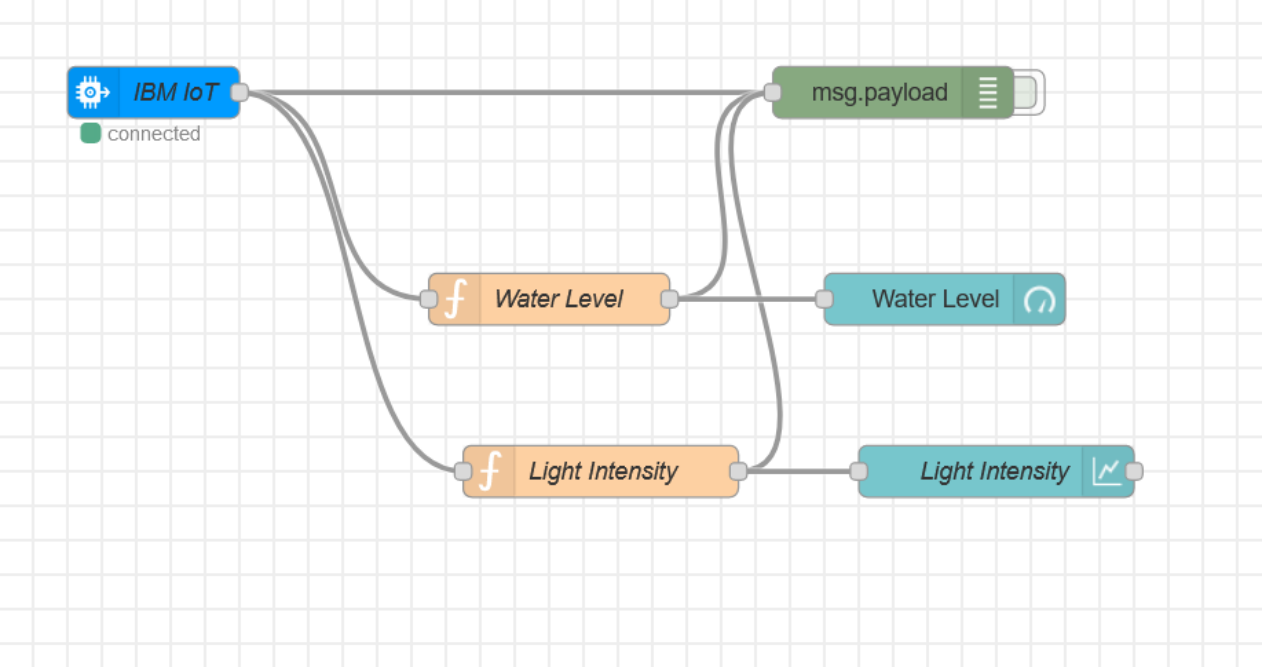
Question: Develop a code to upload the water tank level and light intensity values to the IBM IoT platform and visualize them in the web application.

Answer:

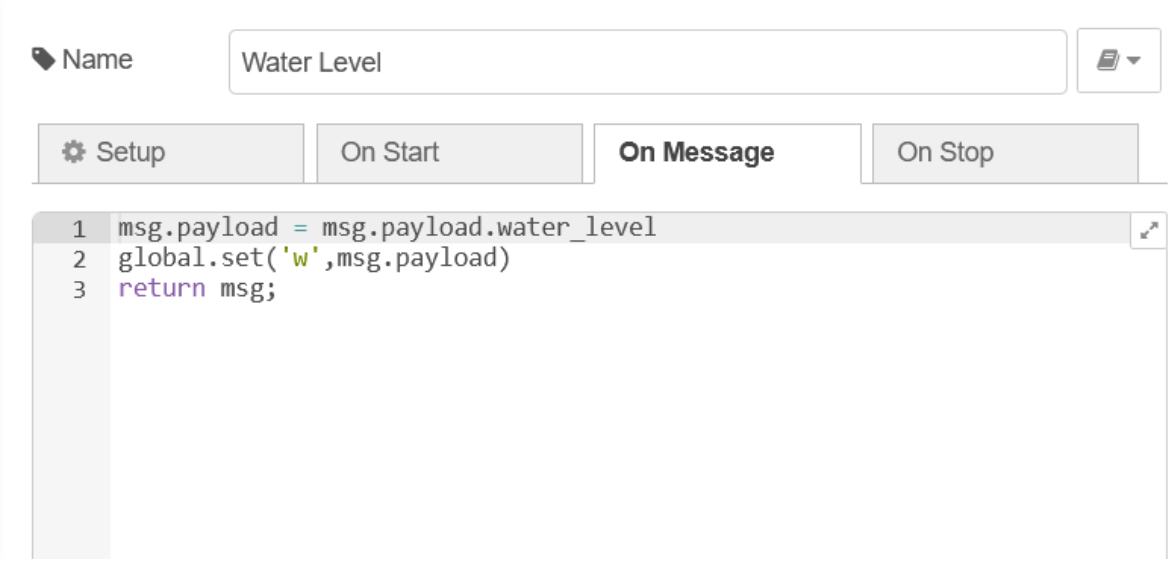
Python Code:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "0iu3oj",
        "typeId": "IOT",
        "deviceId":"1234"
    },
    "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:
    w_level=random.randint(0,100)
    l_intensity=random.randint(0,100)
    myData={'water_level':w_level, 'light_intensity':l_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()
```

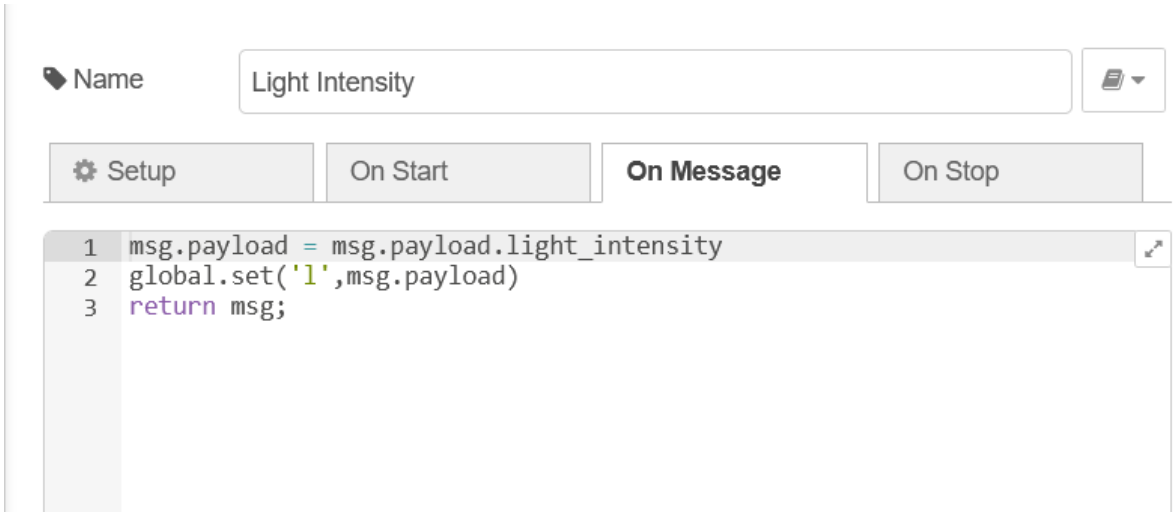
Flow Diagram in Node Red:



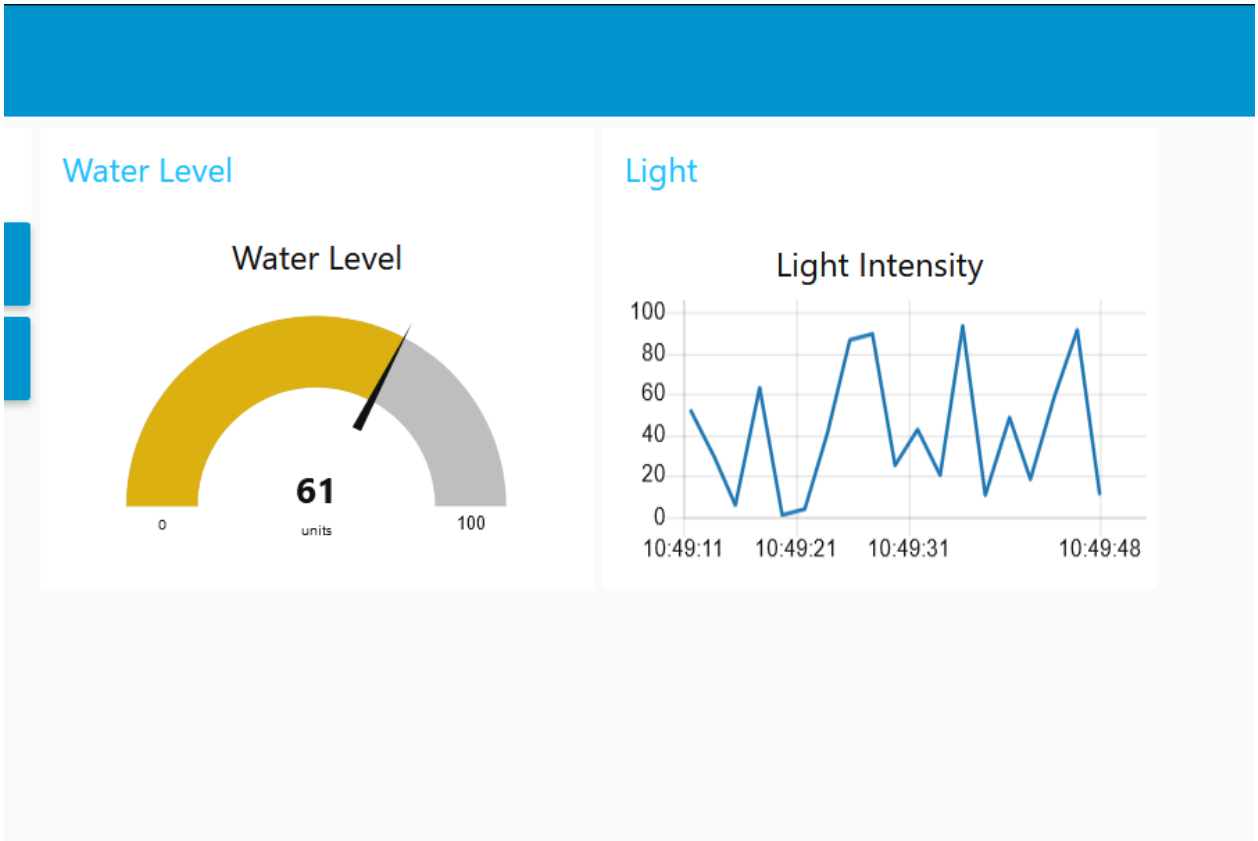
Water Level Function:

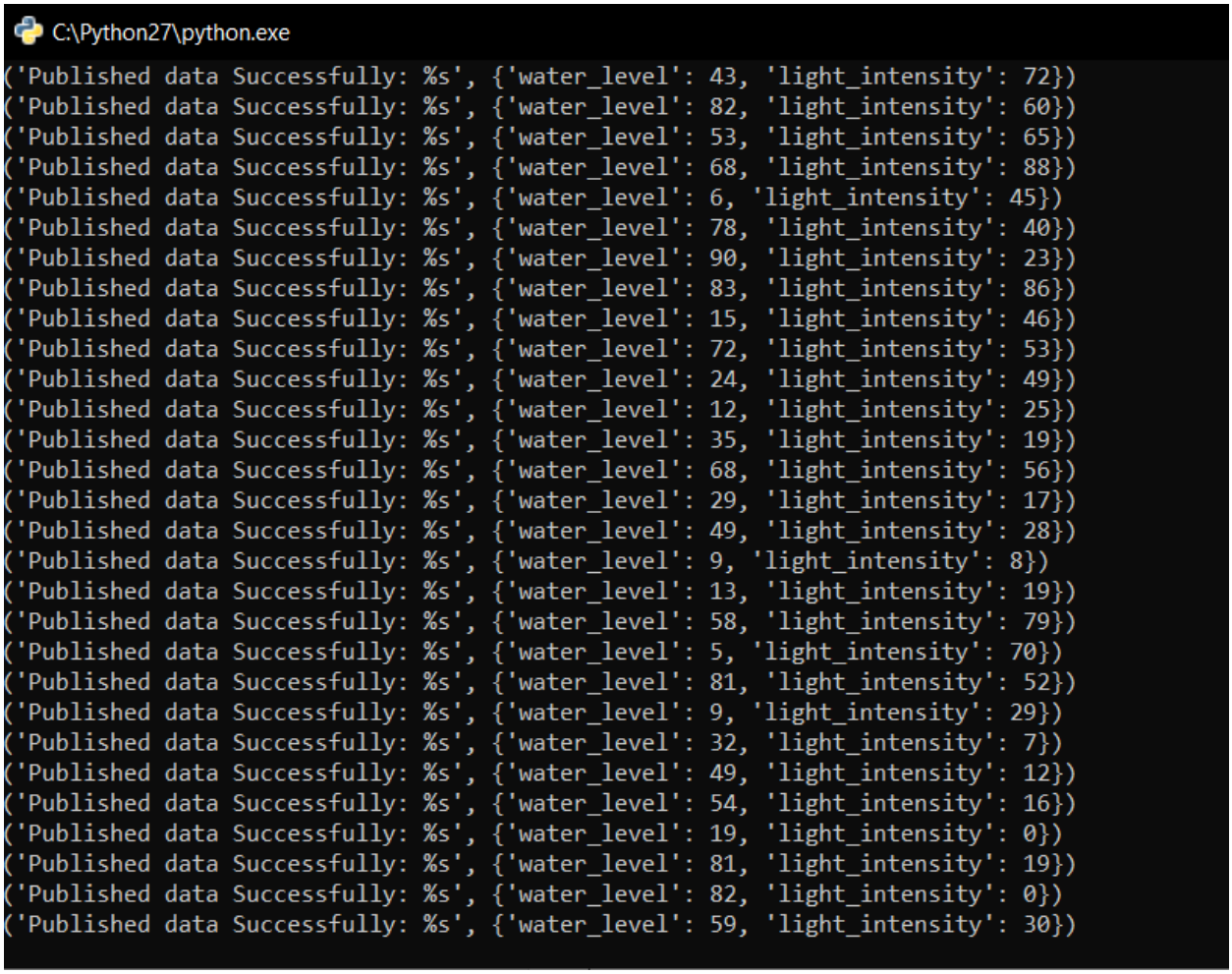


Light Intensity Function:



Web Application Visuals:




C:\Python27\python.exe
('Published data Successfully: %s', {'water_level': 43, 'light_intensity': 72})
('Published data Successfully: %s', {'water_level': 82, 'light_intensity': 60})
('Published data Successfully: %s', {'water_level': 53, 'light_intensity': 65})
('Published data Successfully: %s', {'water_level': 68, 'light_intensity': 88})
('Published data Successfully: %s', {'water_level': 6, 'light_intensity': 45})
('Published data Successfully: %s', {'water_level': 78, 'light_intensity': 40})
('Published data Successfully: %s', {'water_level': 90, 'light_intensity': 23})
('Published data Successfully: %s', {'water_level': 83, 'light_intensity': 86})
('Published data Successfully: %s', {'water_level': 15, 'light_intensity': 46})
('Published data Successfully: %s', {'water_level': 72, 'light_intensity': 53})
('Published data Successfully: %s', {'water_level': 24, 'light_intensity': 49})
('Published data Successfully: %s', {'water_level': 12, 'light_intensity': 25})
('Published data Successfully: %s', {'water_level': 35, 'light_intensity': 19})
('Published data Successfully: %s', {'water_level': 68, 'light_intensity': 56})
('Published data Successfully: %s', {'water_level': 29, 'light_intensity': 17})
('Published data Successfully: %s', {'water_level': 49, 'light_intensity': 28})
('Published data Successfully: %s', {'water_level': 9, 'light_intensity': 8})
('Published data Successfully: %s', {'water_level': 13, 'light_intensity': 19})
('Published data Successfully: %s', {'water_level': 58, 'light_intensity': 79})
('Published data Successfully: %s', {'water_level': 5, 'light_intensity': 70})
('Published data Successfully: %s', {'water_level': 81, 'light_intensity': 52})
('Published data Successfully: %s', {'water_level': 9, 'light_intensity': 29})
('Published data Successfully: %s', {'water_level': 32, 'light_intensity': 7})
('Published data Successfully: %s', {'water_level': 49, 'light_intensity': 12})
('Published data Successfully: %s', {'water_level': 54, 'light_intensity': 16})
('Published data Successfully: %s', {'water_level': 19, 'light_intensity': 0})
('Published data Successfully: %s', {'water_level': 81, 'light_intensity': 19})
('Published data Successfully: %s', {'water_level': 82, 'light_intensity': 0})
('Published data Successfully: %s', {'water_level': 59, 'light_intensity': 30})