SPRINT – 3

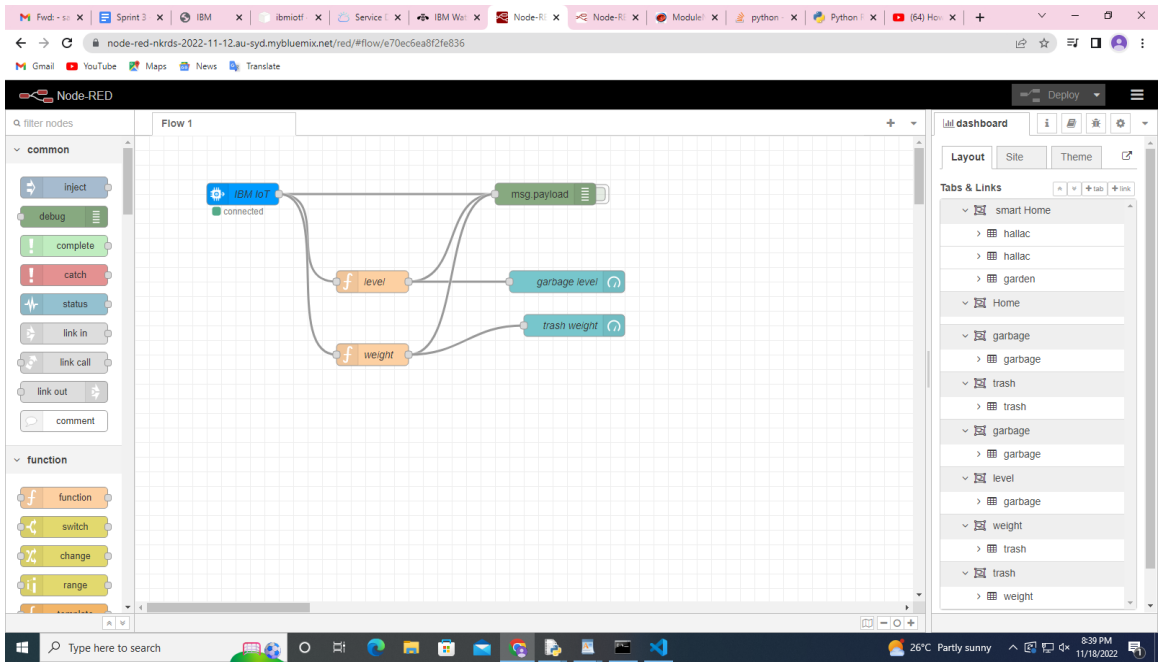
DATE	19 NOVEMBER 2022
TEAM ID	PNT2022TMID432932
PROJECT NAME	SMART WASTE MANAGEMENT FOR METROPOLITAN CITIES- IOT

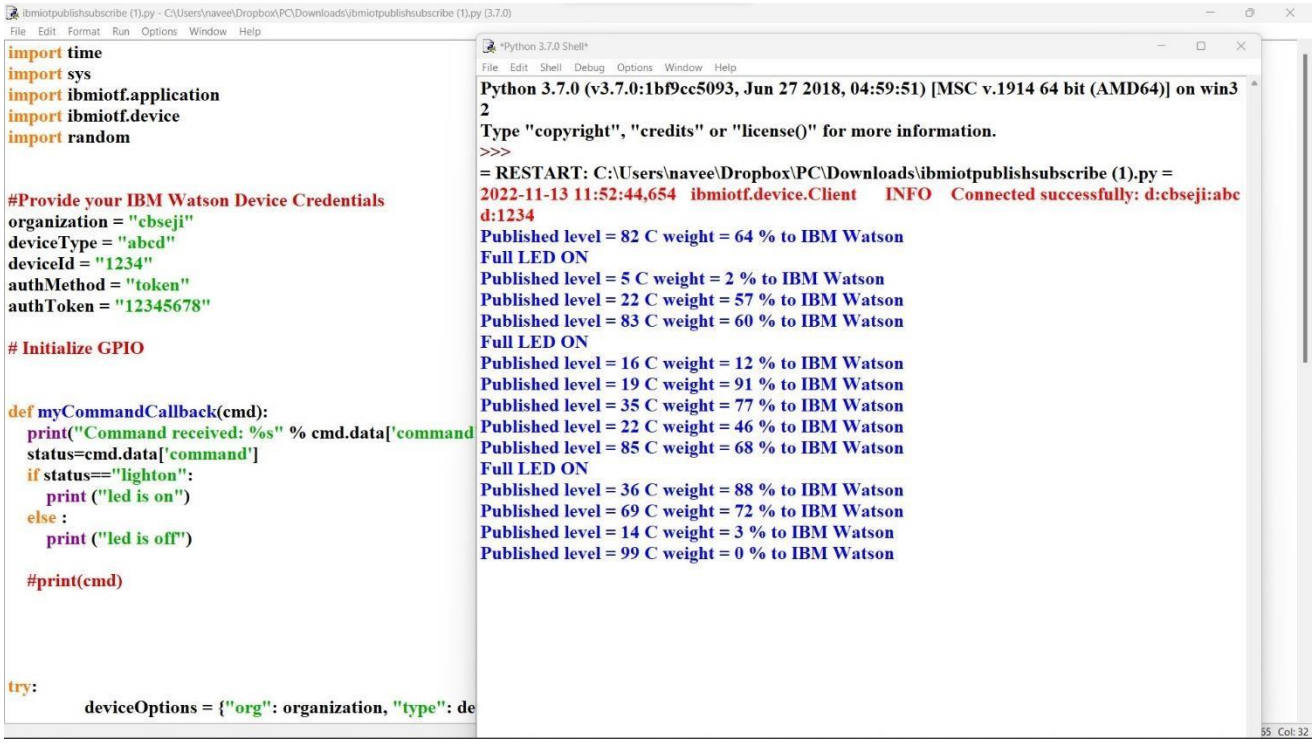
PYTHON CODE : [To connect IBM WATSON]

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "vg9l12"
deviceType = "abcd"
deviceId = "123"
authMethod = "use-token-auth"
authToken = "12345678"

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
if status=="lighton":
    print ("led is on")
else :
    print ("led is off")



#print(cmd)

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()
# Connect and send a datapoint "hello" with value "world" into thecloud as an event of
type "greeting" 10 times
deviceCli.connect()
while True:
#Get Sensor Data from DHT11

    level=random.randint(0,100)
    weight=random.randint(0,100)
    data = { 'level' : level, 'weight': weight }
#print data
def myOnPublishCallback():
    print ("Published level = %s C" % level, "weight = %s %%" % weight, "to IBM
Watson")
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
if not success:
    print("Not connected to IoTF")
time.sleep(10)
deviceCli.commandCallback = myCommandCallback
if (level>=75):
    print("Full LED ON")
# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

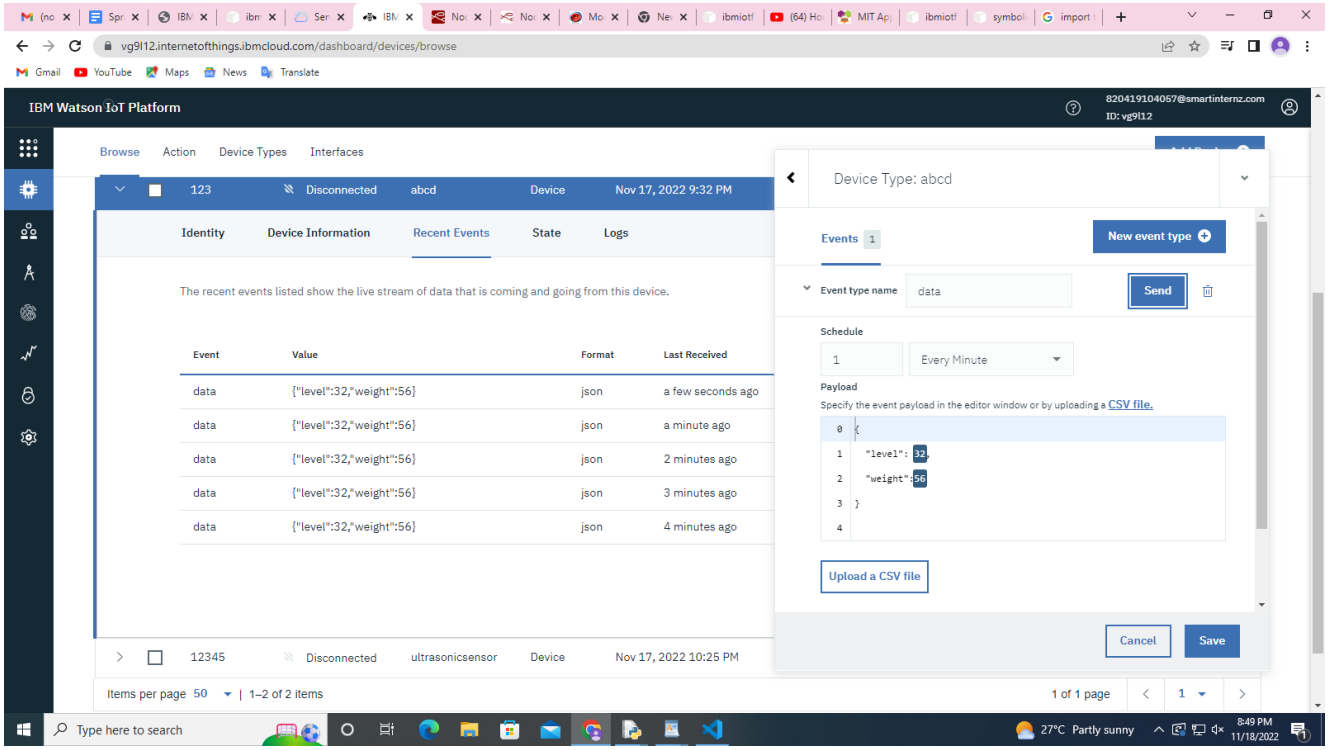
OUTPUT :

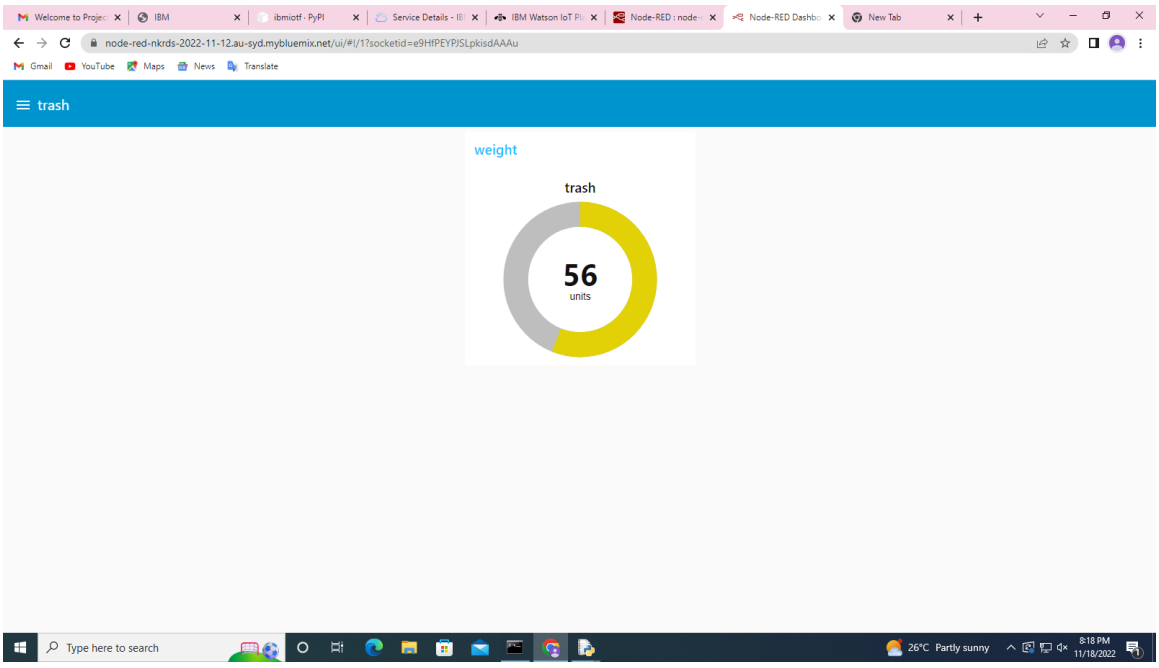


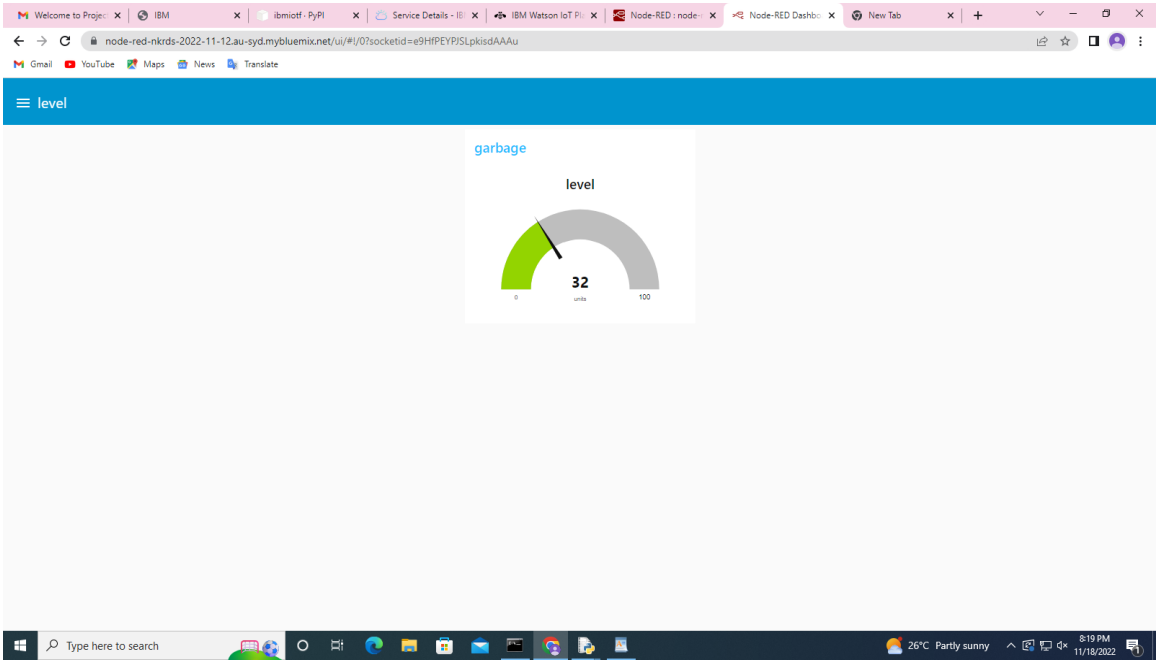


```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random


#Provide your IBM Watson Device Credentials
organization = "cbseji"
deviceType = "abcd"
deviceId = "1234"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO


def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command
    status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
        print ("led is off")

    #print(cmd)



try:
        deviceOptions = {"org": organization, "type": de
```

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\navee\Dropbox\PC\Downloads\ibmiotpublishsubscribe (1).py =
2022-11-13 11:52:44,654  ibmiotf.device.Client     INFO    Connected successfully: d:cbseji:abcd:1234
Published level = 82 C weight = 64 % to IBM Watson
Full LED ON
Published level = 5 C weight = 2 % to IBM Watson
Published level = 22 C weight = 57 % to IBM Watson
Published level = 83 C weight = 60 % to IBM Watson
Full LED ON
Published level = 16 C weight = 12 % to IBM Watson
Published level = 19 C weight = 91 % to IBM Watson
Published level = 35 C weight = 77 % to IBM Watson
Published level = 22 C weight = 46 % to IBM Watson
Published level = 85 C weight = 68 % to IBM Watson
Full LED ON
Published level = 36 C weight = 88 % to IBM Watson
Published level = 69 C weight = 72 % to IBM Watson
Published level = 14 C weight = 3 % to IBM Watson
Published level = 99 C weight = 0 % to IBM Watson
```


IBM Watson IoT Platform
820419104057@smartinternz.com
ID: vg9l12
Browse
Action
Device Types
Interfaces
123
Disconnected
abcd
Device
Nov 17, 2022 9:32 PM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
data
{"level":32,"weight":56}
json
a few seconds ago
data
{"level":32,"weight":56}
json
a minute ago
data
{"level":32,"weight":56}
json
2 minutes ago
data
{"level":32,"weight":56}
json
3 minutes ago
data
{"level":32,"weight":56}
json
4 minutes ago
12345
Disconnected
ultrasonicsensor
Device
Nov 17, 2022 10:25 PM
Items per page 50
1–2 of 2 items
1 of 1 page
Device Type: abcd
Events 1
New event type
Event type name
data
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"level": 32,
"weight": 56
}
Upload a CSV file
Cancel
Save
Type here to search
27°C Partly sunny
8:49 PM
11/18/2022


trash
weight
trash
56
units
Type here to search
26°C Partly sunny
8:18 PM
11/18/2022


Welcome to Projec
IBM
ibmiotf · PyPI
Service Details - IB
IBM Watson IoT Pl
Node-RED : node-r
Node-RED Dashbo
New Tab
node-red-nkrds-2022-11-12.au-syd.mybluemix.net/ui/#!/0?socketid=e9HfPEYPJSLpkisdAAAu
Gmail
YouTube
Maps
News
Translate
level
garbage
level
32
units
0
100
Type here to search
26°C Partly sunny
8:19 PM
11/18/2022