SPRINT - 3

DATE	7 NOVEMBER 2022
TEAM ID	PNT2022TMID25296
PROJECT NAME	SMART WASTE MANAGEMENT FORMETROPOLITAN CITIES-IOT

PYTHON CODE : [To connect IBM WATSON]

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


#Provide your IBM Watson Device Credentials
organization = "wjmfdn"
deviceType = "abcd"

deviceId = "1234"
authMethod =
"token"
authToken  =
"12345678"

# Initialize GPIO
```

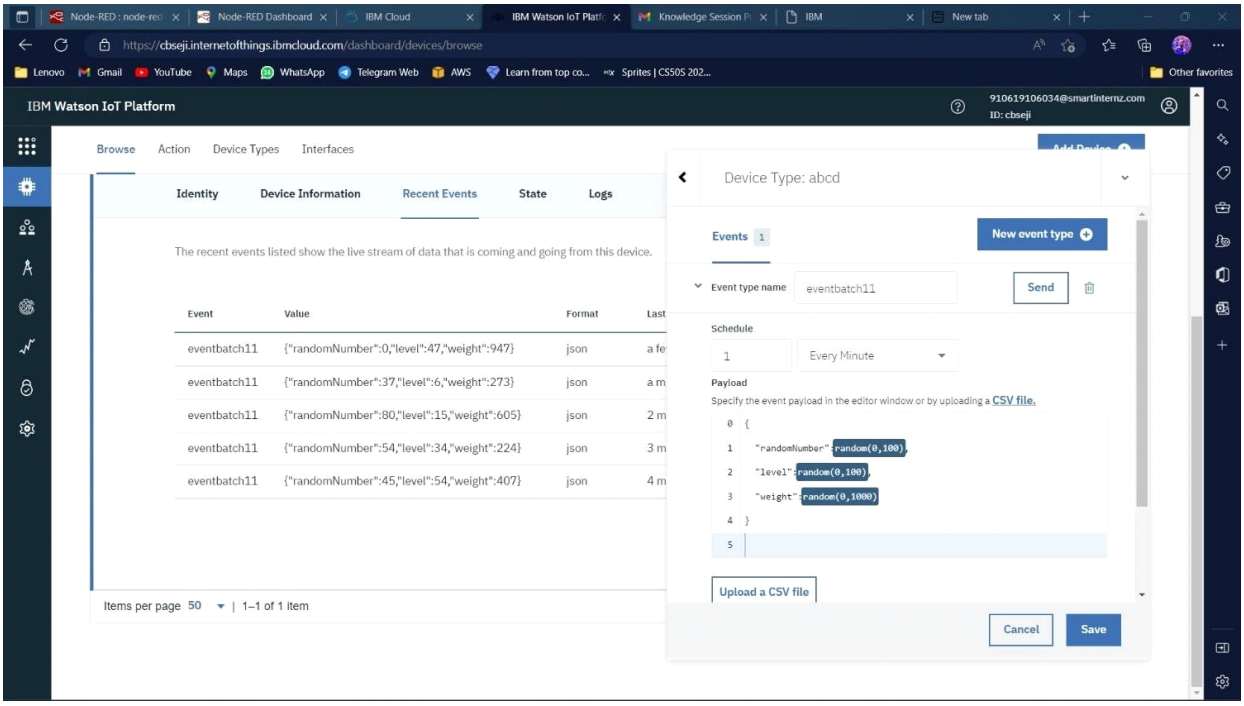
```
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if
        status=="light
        on":print ("led
        is on")
    else :

        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
```

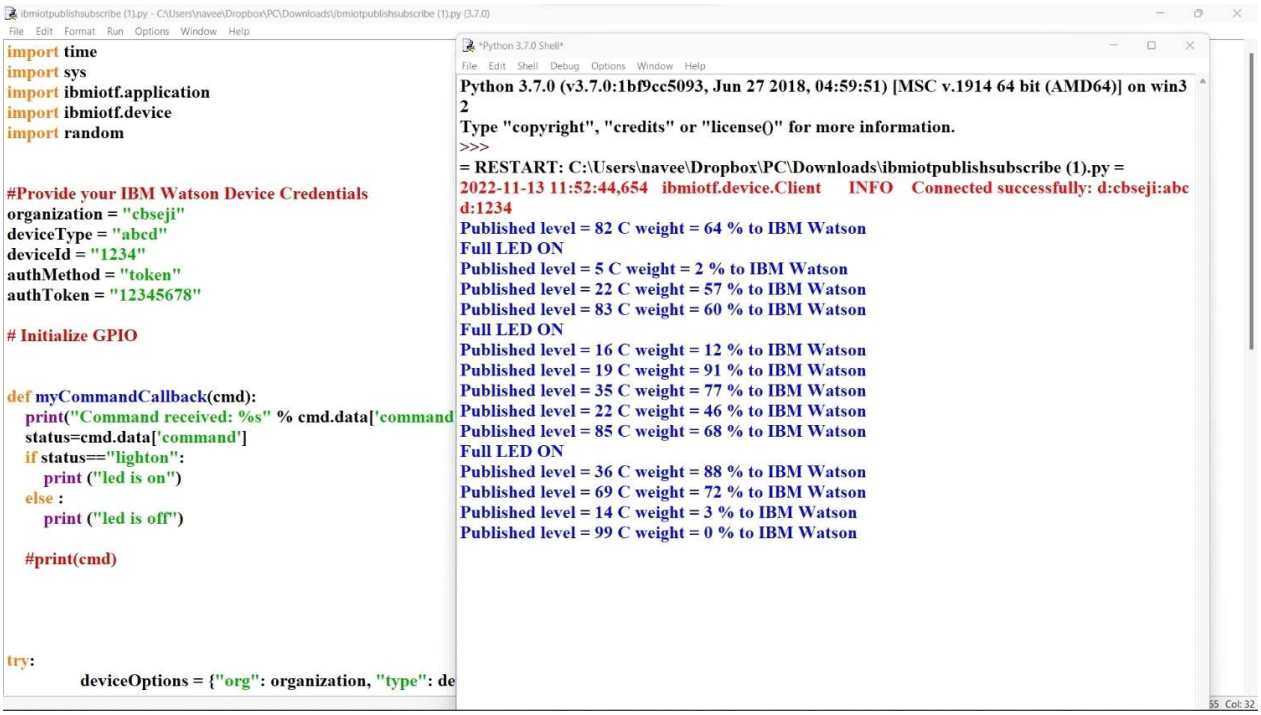
```
deviceCli.connect()

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=myOnPublishCallb
        ack)if not success:
            print("Not connected to
        IoTF")time.sleep(1)
        deviceCli.commandCallback =



myCommandCallbackif (level>=75):
```

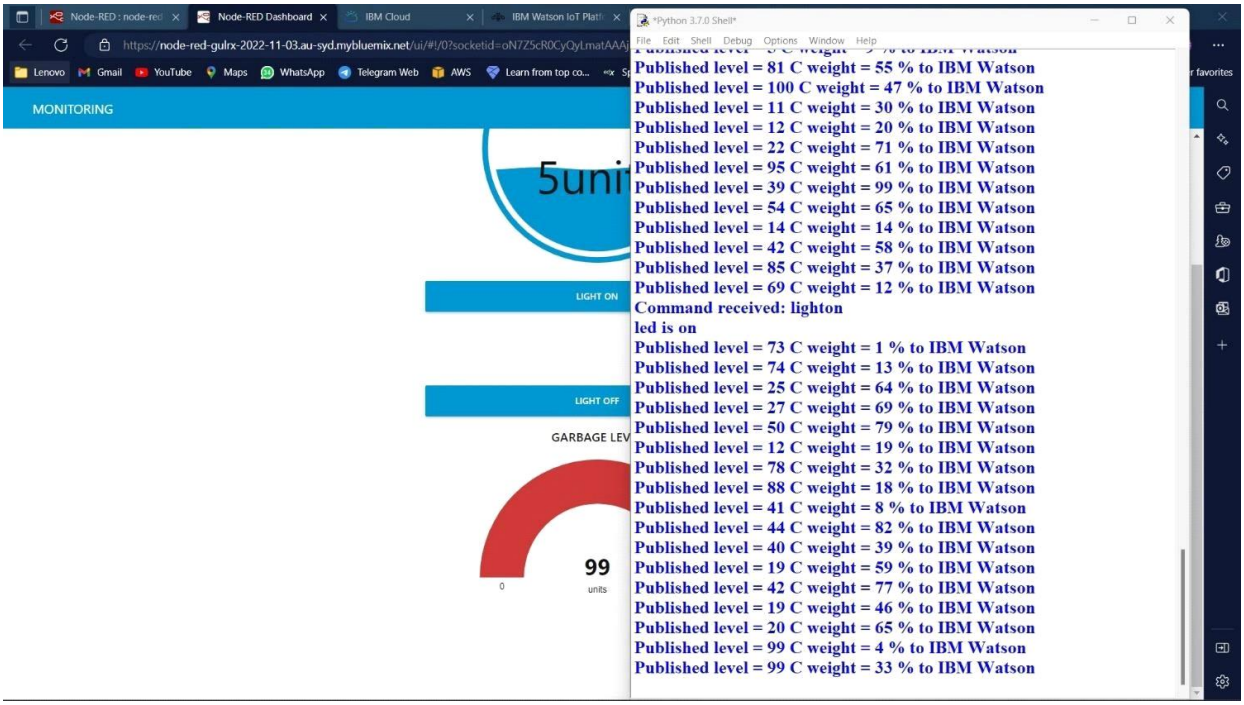
print("Full LED ON")

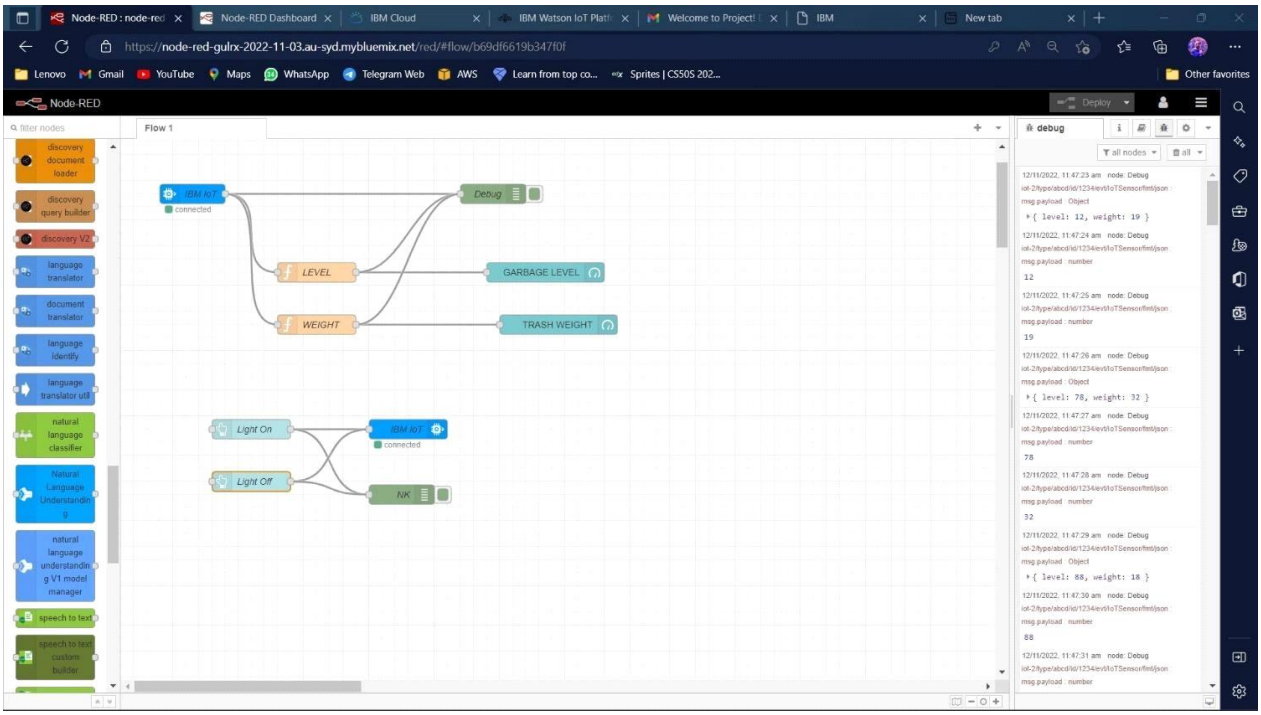
Disconnect the device and application from the clouddeviceCli.disconnect()

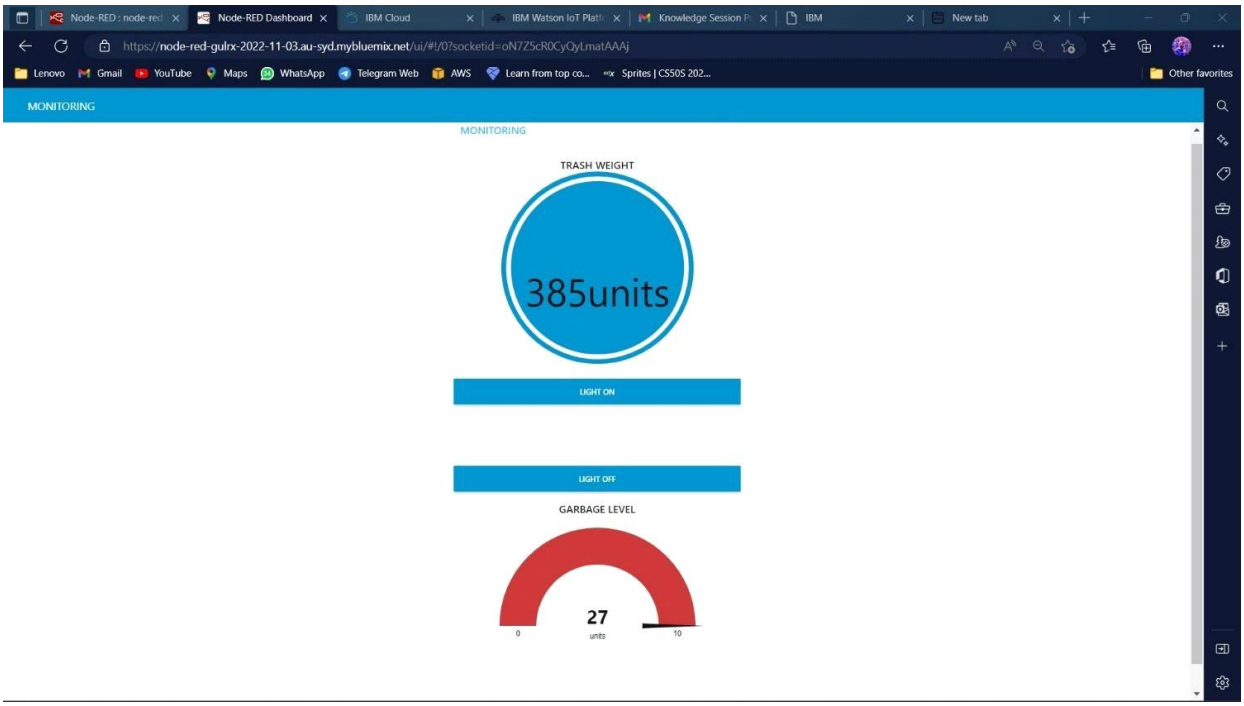
OUTPUT :




ibmiotpublishsubscribe (1).py - C:\Users\navee\Dropbox\PC\Downloads\ibmiotpublishsubscribe (1).py (3.7.0)
File Edit Format Run Options Window Help
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 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win3
2
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:abc
d: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
55 Col: 32


Node-RED Dashboard
IBM Cloud
MONITORING
LIGHT ON
LIGHT OFF
GARBAGE LEV
99
units
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Published level = 81 C weight = 55 % to IBM Watson
Published level = 100 C weight = 47 % to IBM Watson
Published level = 11 C weight = 30 % to IBM Watson
Published level = 12 C weight = 20 % to IBM Watson
Published level = 22 C weight = 71 % to IBM Watson
Published level = 95 C weight = 61 % to IBM Watson
Published level = 39 C weight = 99 % to IBM Watson
Published level = 54 C weight = 65 % to IBM Watson
Published level = 14 C weight = 14 % to IBM Watson
Published level = 42 C weight = 58 % to IBM Watson
Published level = 85 C weight = 37 % to IBM Watson
Published level = 69 C weight = 12 % to IBM Watson
Command received: lighton
led is on
Published level = 73 C weight = 1 % to IBM Watson
Published level = 74 C weight = 13 % to IBM Watson
Published level = 25 C weight = 64 % to IBM Watson
Published level = 27 C weight = 69 % to IBM Watson
Published level = 50 C weight = 79 % to IBM Watson
Published level = 12 C weight = 19 % to IBM Watson
Published level = 78 C weight = 32 % to IBM Watson
Published level = 88 C weight = 18 % to IBM Watson
Published level = 41 C weight = 8 % to IBM Watson
Published level = 44 C weight = 82 % to IBM Watson
Published level = 40 C weight = 39 % to IBM Watson
Published level = 19 C weight = 59 % to IBM Watson
Published level = 42 C weight = 77 % to IBM Watson
Published level = 19 C weight = 46 % to IBM Watson
Published level = 20 C weight = 65 % to IBM Watson
Published level = 99 C weight = 4 % to IBM Watson
Published level = 99 C weight = 33 % to IBM Watson


Node-RED
Flow 1
IBM IoT
connected
Debug
LEVEL
GARBAGE LEVEL
WEIGHT
TRASH WEIGHT
Light On
Light Off
NK
debug


Node-RED : node-red
Node-RED Dashboard
IBM Cloud
IBM Watson IoT Platfo
Knowledge Session P
IBM
New tab
https://node-red-gulrx-2022-11-03.au-syd.mybluemix.net/ui/#!/0?socketid=oN7Z5cR0CyQyLmatAAAj
Lenovo
Gmail
YouTube
Maps
WhatsApp
Telegram Web
AWS
Learn from top co...
Sprites | CS50S 202...
Other favorites
MONITORING
MONITORING
TRASH WEIGHT
385units
LIGHT ON
LIGHT OFF
GARBAGE LEVEL
27
units
0
10