Delievery of Sprint-4

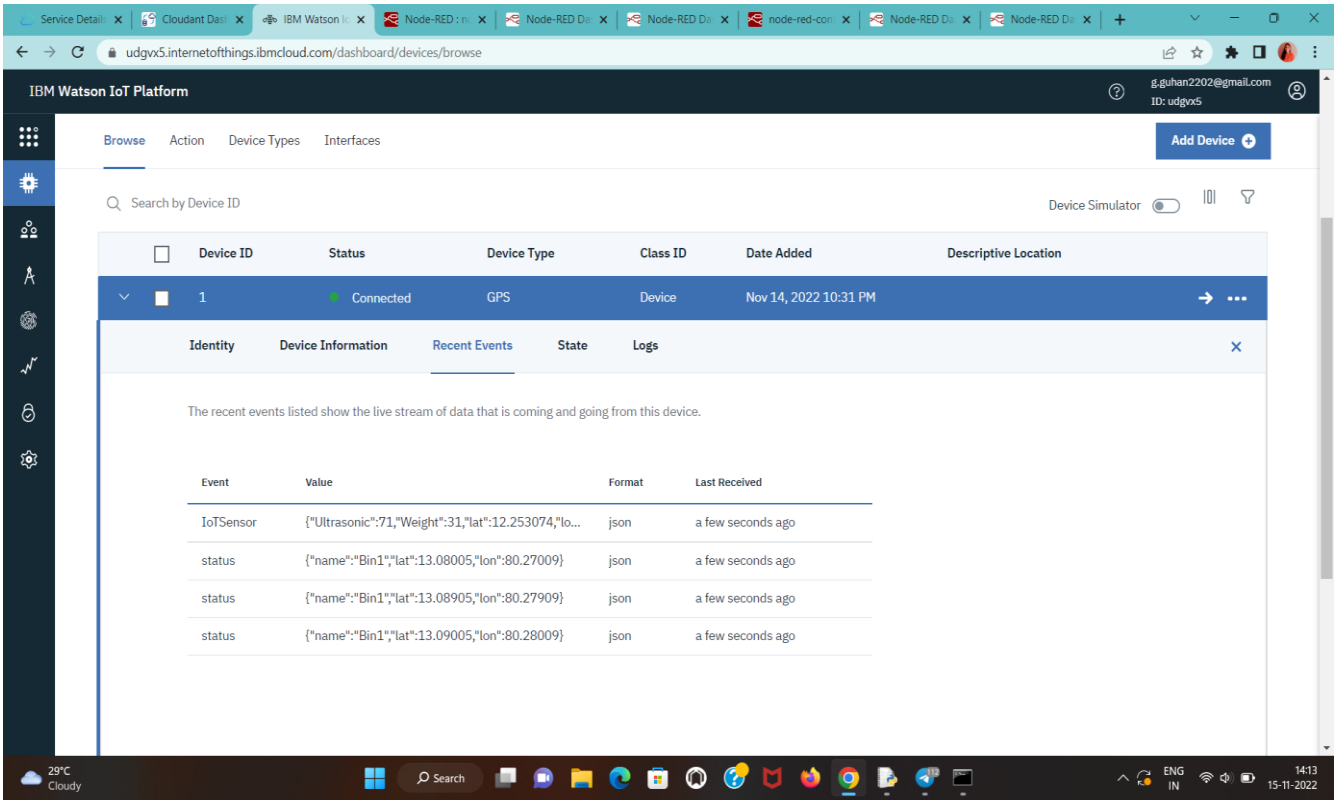
Date	15 November 2022
Team ID	PNT2022TMID42279
Project Name	SMART WASTE MANAGEMENT SYSTEM FORMETROPOLITAN CITIES
Maximum Marks	2 Marks

CODE:

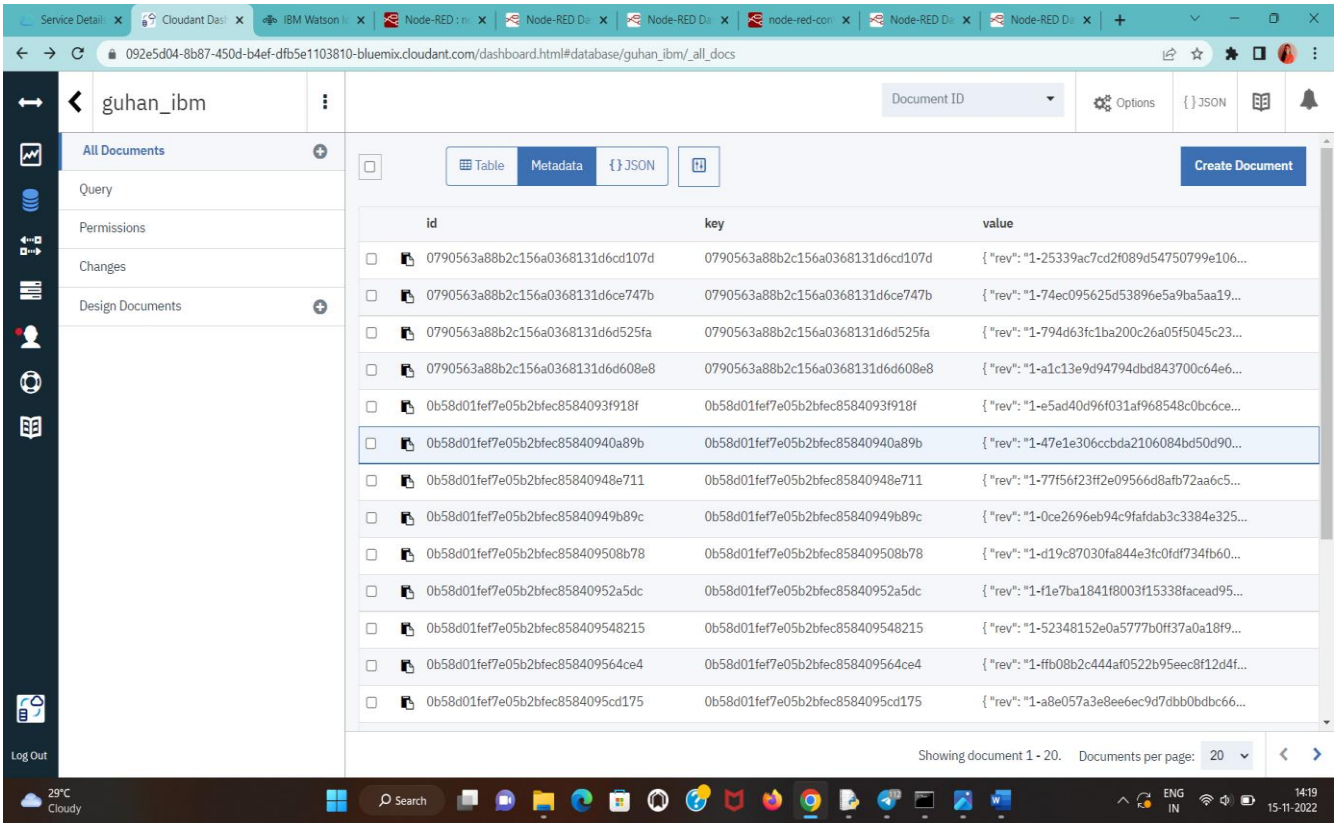
```
import time
import wiotp.sdk.device
import sys
import ibmiotf.application
import ibmiotf.device
import random
import sys
#Provide your IBM Watson Device Credentials
organization = "udgvx5"
deviceType = "GPS"
deviceId = "1"
authMethod = "token"
authToken = "12345678"

myConfig = {
    "identity":{
        "orgId":"udgvx5",
        "typeId":"GPS",
        "deviceId":"1"
     },
     "auth":{
         "token":"12345678"
    }
}
def myCommandCallback2(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']


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

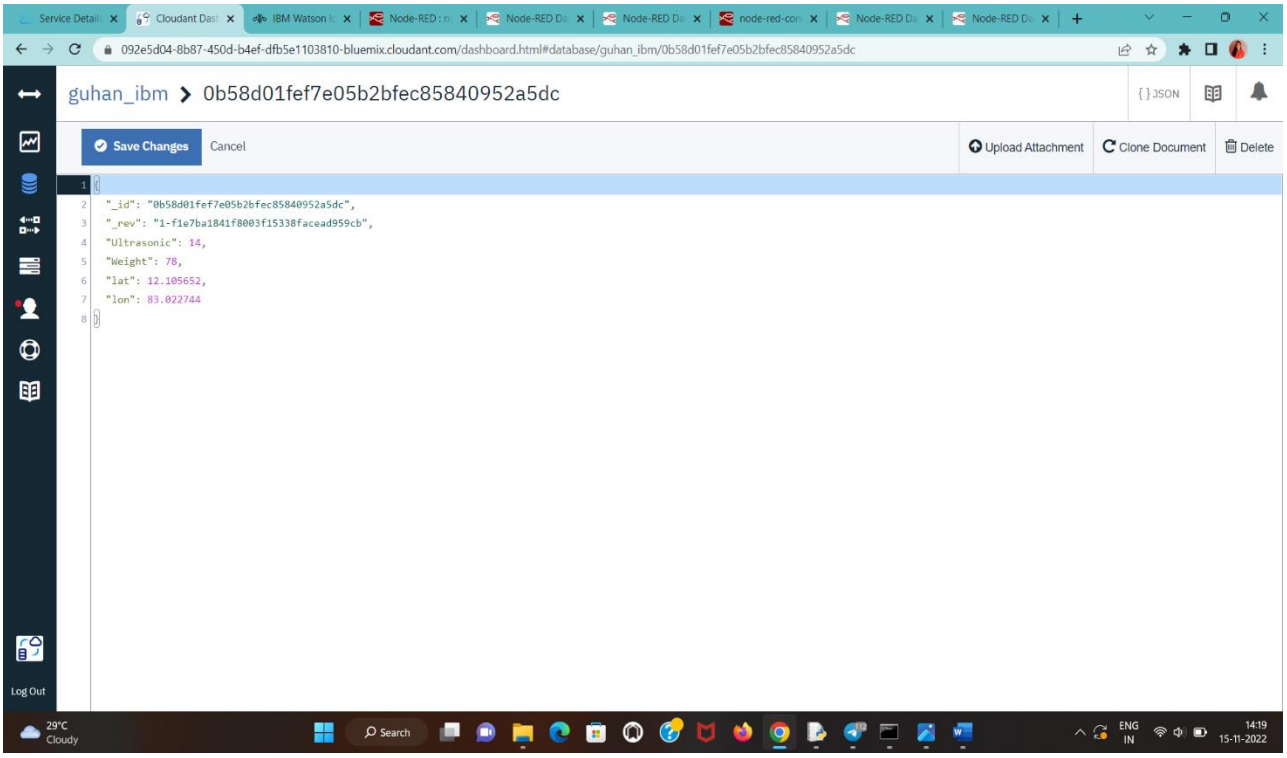
```
    sys.exit()

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
deviceCli.connect()

def pub(data):
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)



while True:
    time.sleep(2)
    ult_son=random.randint(0,80)
    weight=random.randint(0,100)
    lat = round(random.uniform(12.03, 13.50), 6)
    lon = round(random.uniform(80.80, 85.90), 6)
    data = {'Ultrasonic' : ult_son, 'Weight' : weight , 'lat' : lat,'lon':lon}
    #print data
    def myOnPublishCallback():
        print ("Published Ultrasonic :%s Cm" %ult_son, "Weight:%s kg " %weight, "lat: %s" %lat,"lon: %s"
%lon)
    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
    on_publish=myOnPublishCallback)
    if not success:5
    time.sleep(1)
    deviceCli.commandCallback = myCommandCallback

    myData={'name':'Bin1','lat': 13.08005,'lon': 80.27009}
    pub(myData)
    time.sleep(3)
    myData={'name':'Bin1','lat': 13.09005,'lon': 80.28009}
    pub(myData)
    time.sleep(3)
    myData={'name':'Bin1','lat': 13.08905,'lon': 80.27909}
    pub(myData)
    time.sleep(3)

    client.commandCallback = myCommandCallback2
# Disconnect the device and application from the cloud
deviceCli.disconnect()
client.disconnect()
```

IBM Watson Platform Output:

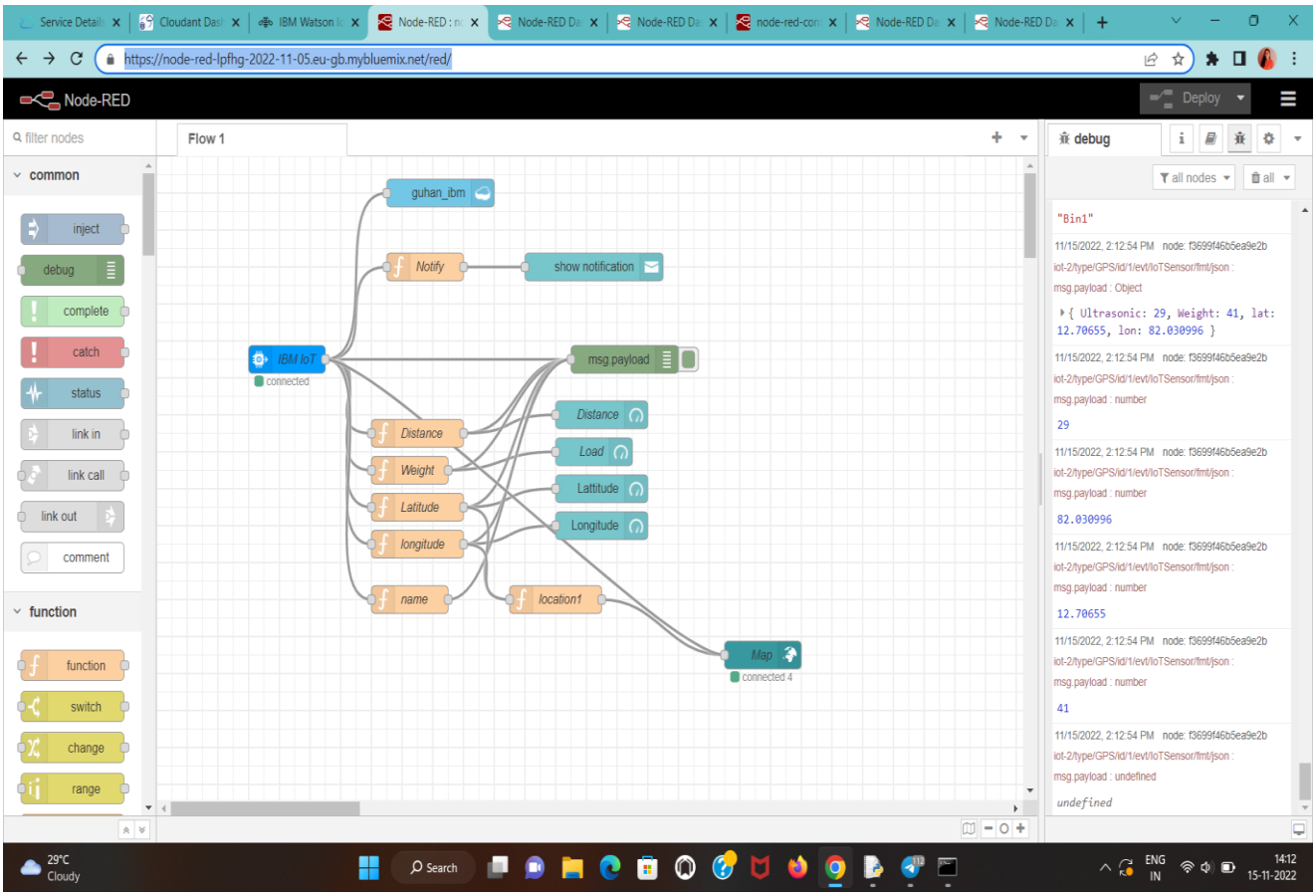


Cloudant Output:

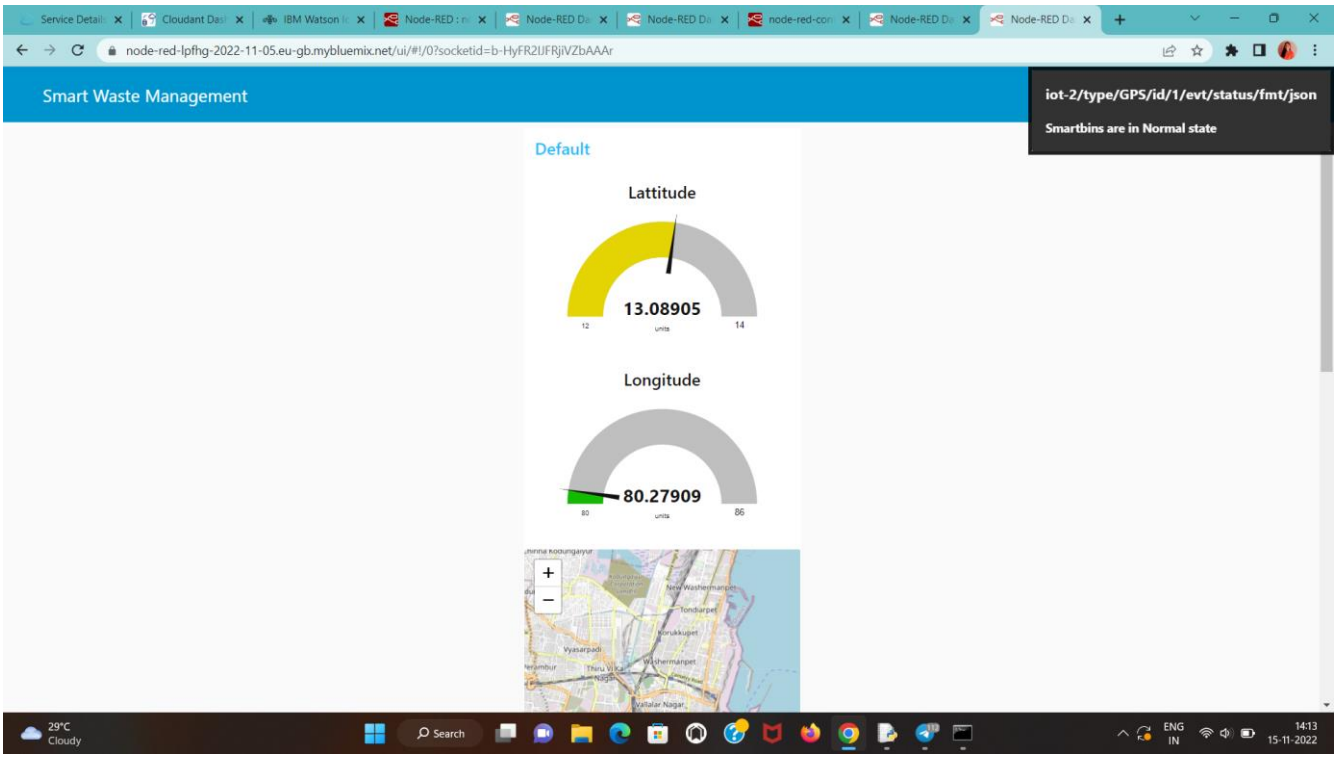


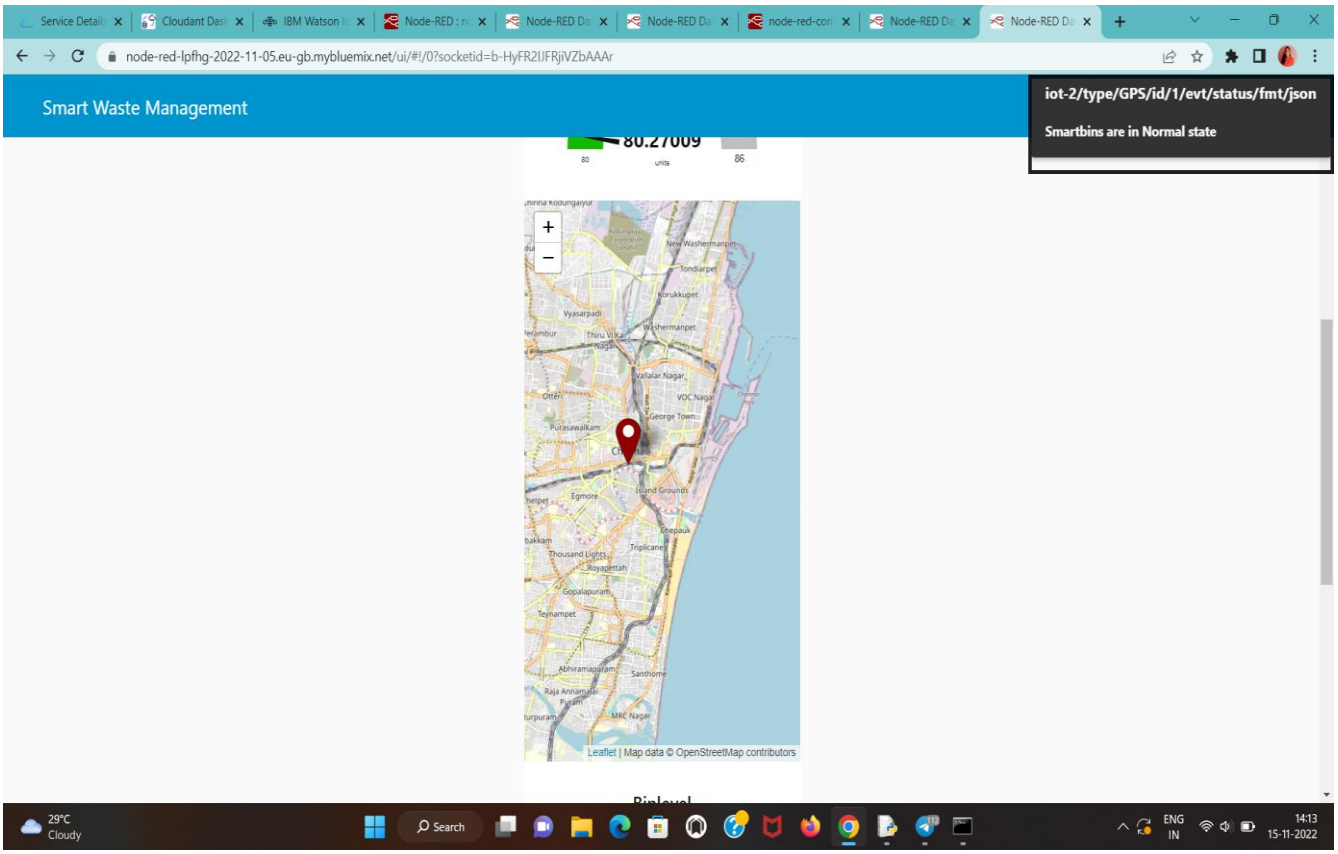


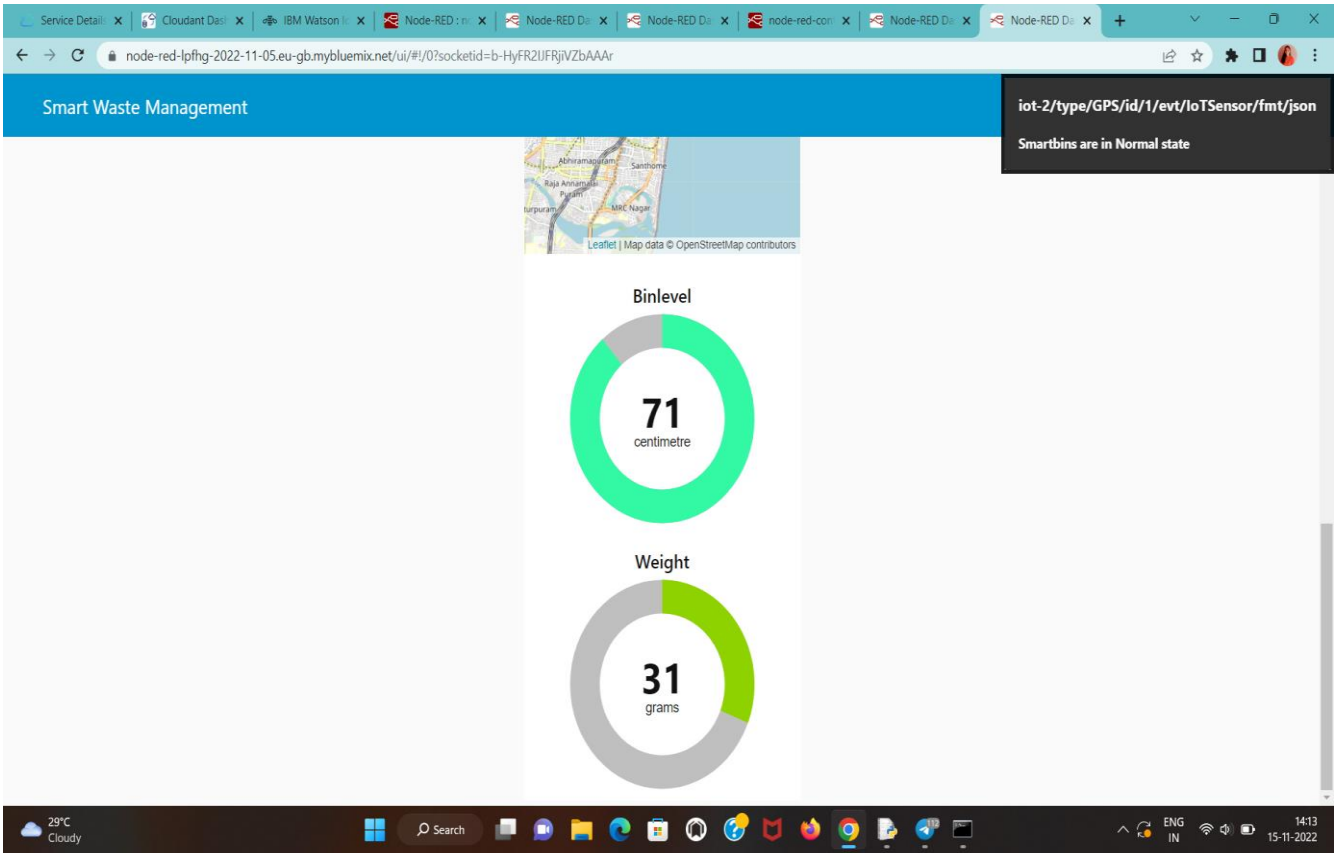
NodeRed Platform:



Web UI Output:






node-red-lpfhg-2022-11-05.eu-gb.mybluemix.net/ui/#!/0?socketid=b-HyFR2IJFRjiVZbAAAr
Smart Waste Management
iot-2/type/GPS/id/1/evt/IoTSensor/fmt/json
Smartbins are in Normal state
Abhiramapuram
Santhome
Raja Annamalai Puram
MRC Nagar
Leaflet | Map data © OpenStreetMap contributors
Binlevel
71
centimetre
Weight
31
grams
29°C
Cloudy
Search
ENG
IN
14:13
15-11-2022