Sprint-4

Team Id : PNT2022TMID43463

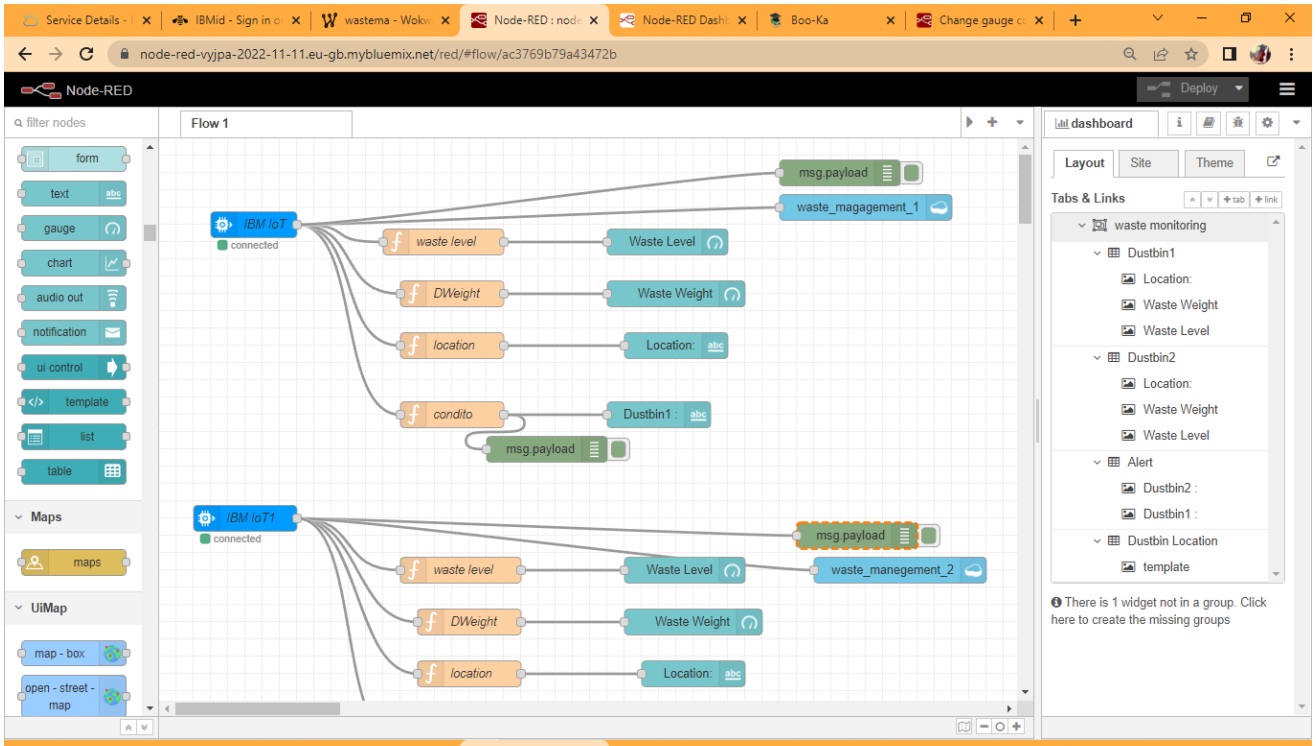
Project : Smart Waste Management system for metropolitan cities

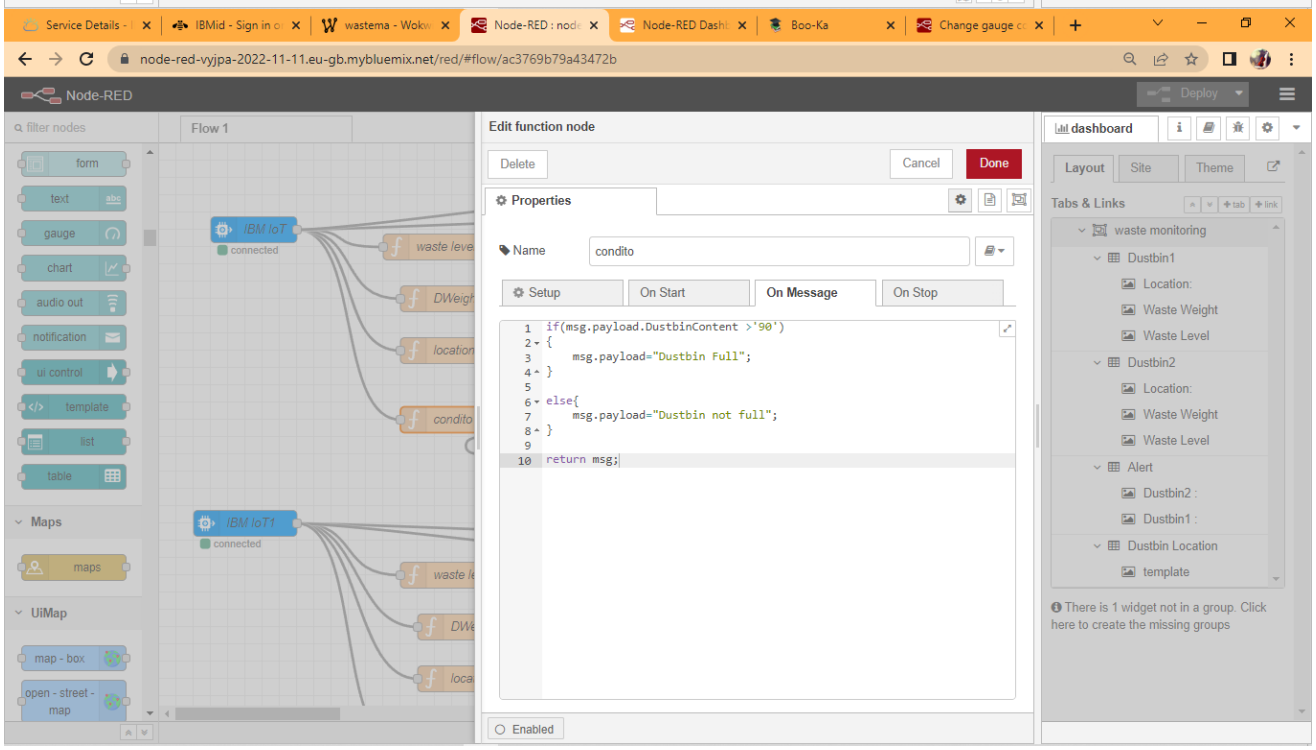
Date : 14/11/2022

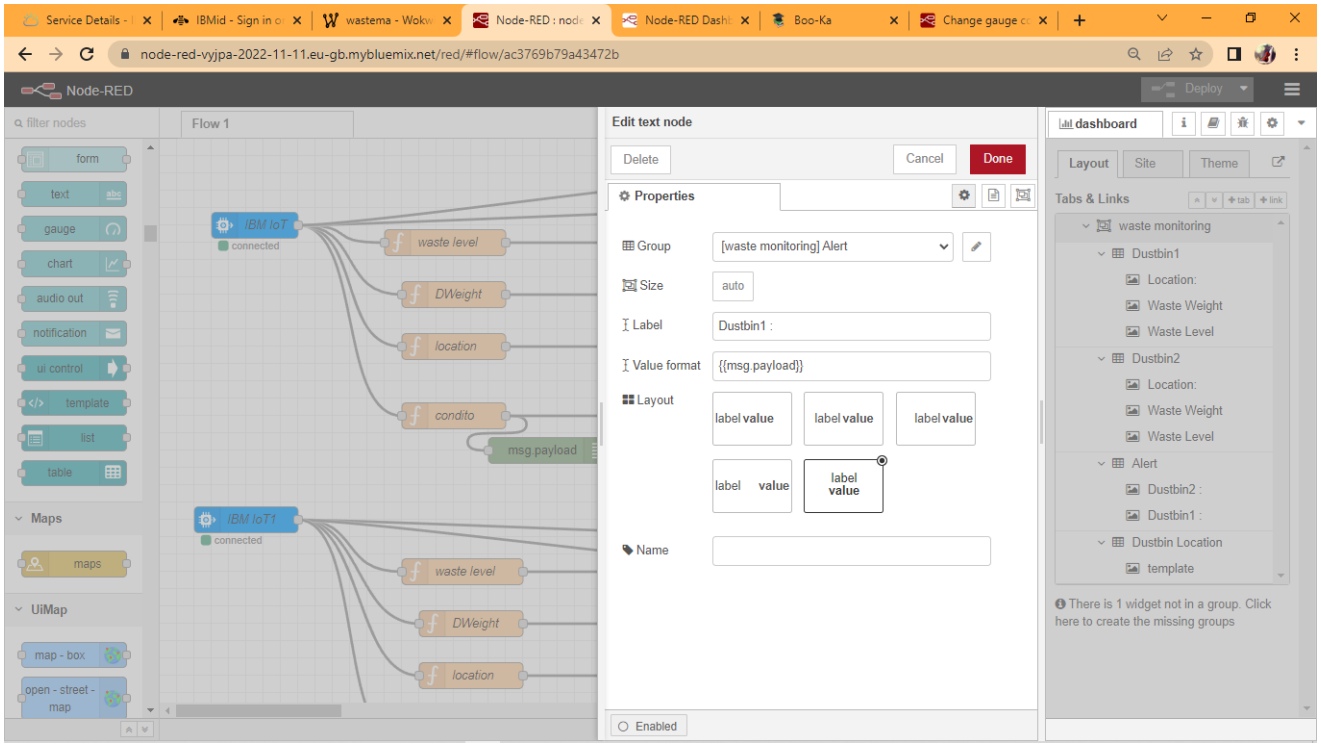
Mark : 20

Web-App Link: https://node-red-vyjpa-2022-11-11.eu-gb.mybluemix.net/ui/#!/0?socketid=YAJZtxlXsh9U8FoyAAAL

“As a authority officer ,I’ll make sure everything is proceeding as planned and without any problem”

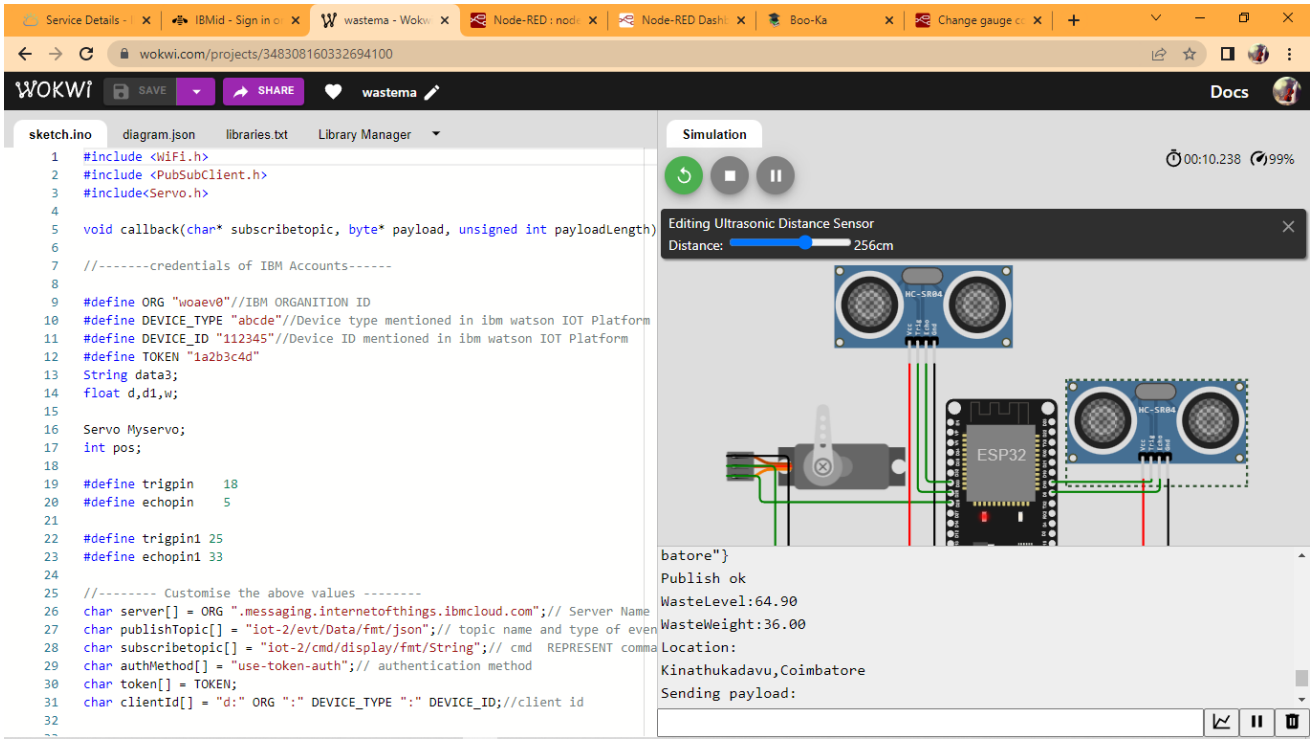

Node-RED
Flow 1
IBM IoT
connected
waste level
DWeight
location
condito
Waste Level
Waste Weight
Location:
Dustbin1 :
msg.payload
waste_magagement_1
IBM IoT1
waste_manegement_2
dashboard
Layout
Site
Theme
Tabs & Links
waste monitoring
Dustbin1
Location:
Waste Weight
Waste Level
Dustbin2
Alert
Dustbin2 :
Dustbin1 :
Dustbin Location
template
There is 1 widget not in a group. Click here to create the missing groups


Edit function node
Delete
Cancel
Done
Properties
Name
condito
Setup
On Start
On Message
On Stop
if(msg.payload.DustbinContent >'90')
{
msg.payload="Dustbin Full";
}
else{
msg.payload="Dustbin not full";
}
return msg;
Enabled

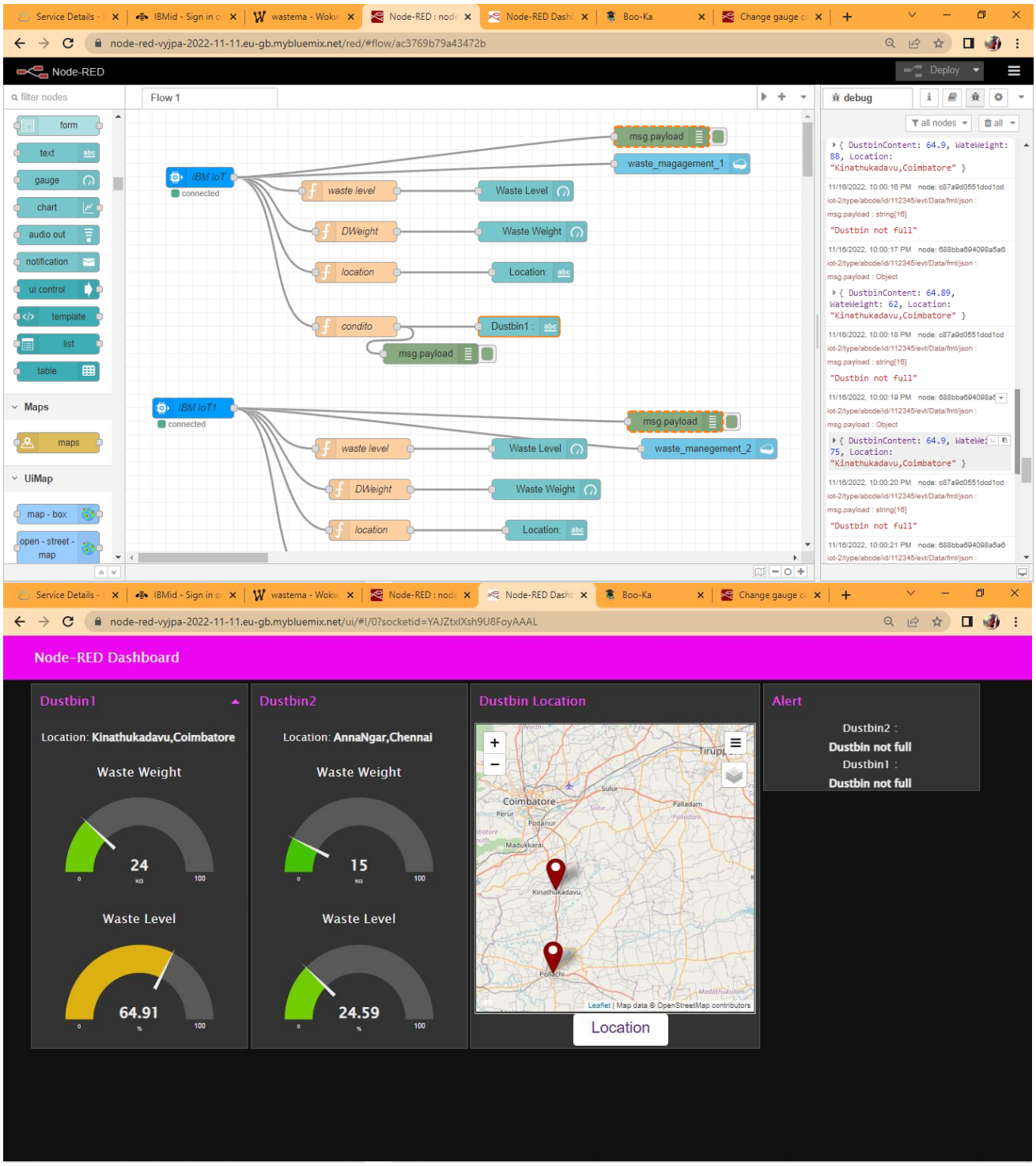


OUTPUT:

OUTPUT-1:




```
#include <WiFi.h>
#include <PubSubClient.h>
#include<Servo.h>

void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)

//-------credentials of IBM Accounts------

#define ORG "woaev0"//IBM ORGANITION ID
#define DEVICE_TYPE "abcde"//Device type mentioned in ibm watson IOT Platform
#define DEVICE_ID "112345"//Device ID mentioned in ibm watson IOT Platform
#define TOKEN "1a2b3c4d"
String data3;
float d,d1,w;

Servo Myservo;
int pos;

#define trigpin    18
#define echopin    5

#define trigpin1 25
#define echopin1 33

//-------- Customise the above values --------
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of even
char subscribetopic[] = "iot-2/cmd/display/fmt/String";// cmd  REPRESENT comma
char authMethod[] = "use-token-auth";// authentication method
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
```


Node-RED
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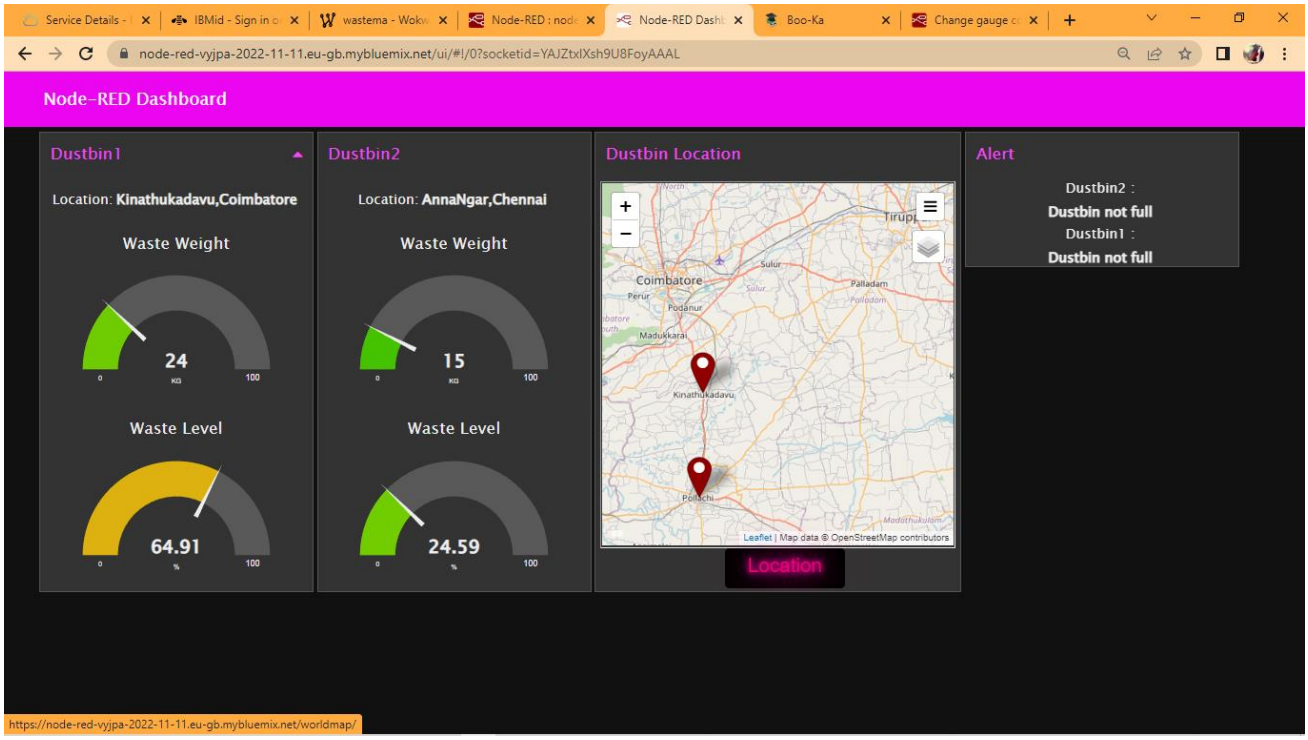
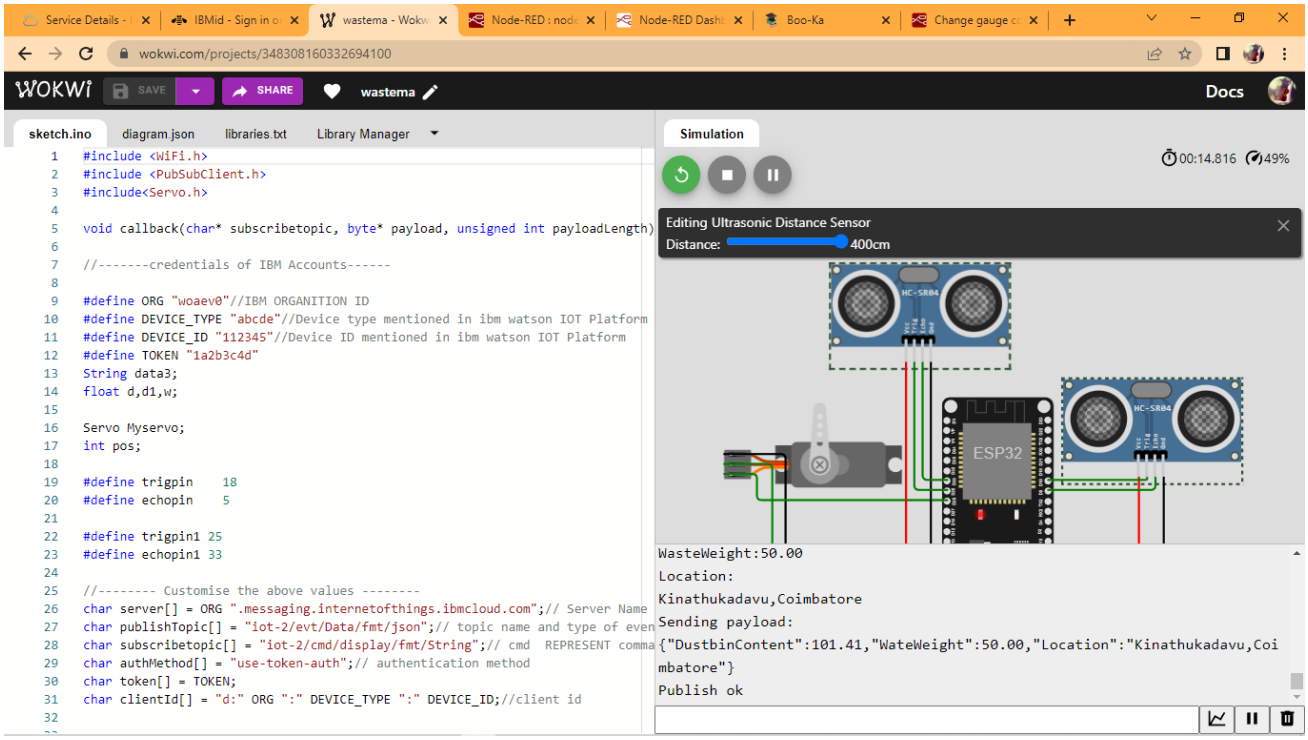
condito
Waste Level
Waste Weight
Location:
Dustbin1 :
msg.payload
waste_magagement_1
IBM IoT1
waste_manegement_2
debug
Node-RED Dashboard
Dustbin1
Location: Kinathukadavu,Coimbatore
Waste Weight
24
Waste Level
64.91
Dustbin2
Location: AnnaNgar,Chennai
15
24.59
Dustbin Location
Coimbatore
Location
Alert
Dustbin2 :
Dustbin not full
Dustbin1 :
Dustbin not full


Node-RED Dashboard
Dustbin1
Location: Kinathukadavu,Coimbatore
Waste Weight
24
Waste Level
64.91
Dustbin2
Location: AnnaNgar,Chennai
Waste Weight
15
Waste Level
24.59
Dustbin Location
Coimbatore
Kinathukadavu
Location
Alert
Dustbin2 :
Dustbin not full
Dustbin1 :
Dustbin not full
https://node-red-vyjpa-2022-11-11.eu-gb.mybluemix.net/worldmap/

OUTPUT-2


wokwi.com/projects/348308160332694100
WOKWI
SAVE
SHARE
wastema
Docs
sketch.ino
diagram.json
libraries.txt
Library Manager
#include <WiFi.h>
#include <PubSubClient.h>
#include<Servo.h>
void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)
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#define ORG "woaev0"//IBM ORGANITION ID
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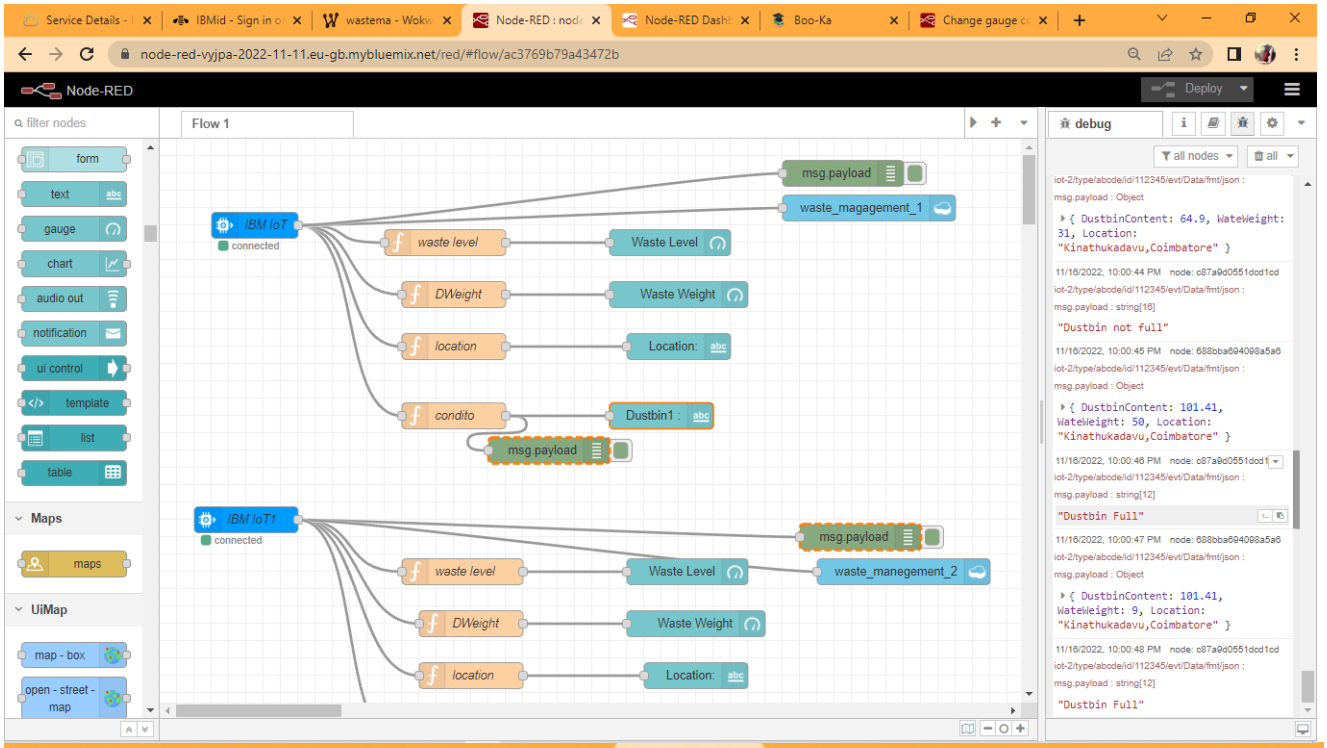
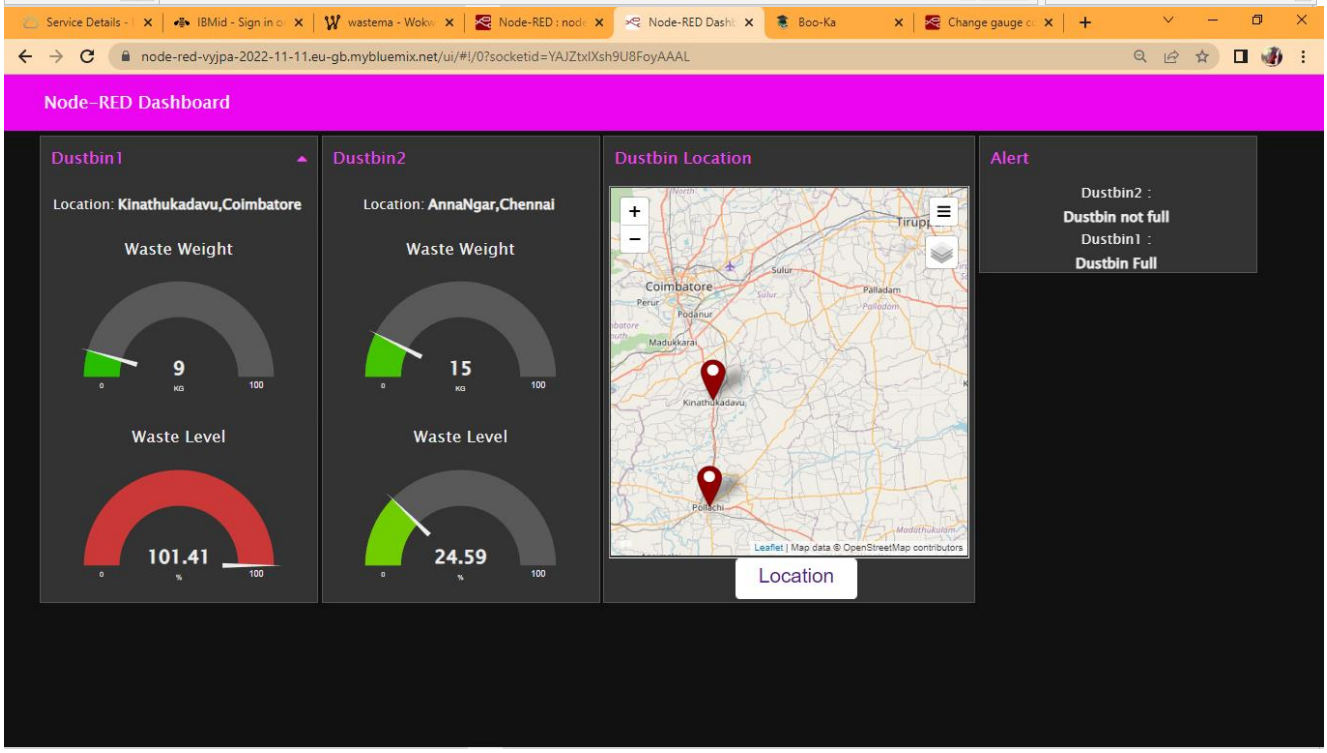
char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of even
char subscribetopic[] = "iot-2/cmd/display/fmt/String";// cmd REPRESENT comma
char authMethod[] = "use-token-auth";// authentication method
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
Simulation
00:14.816
49%
Editing Ultrasonic Distance Sensor
Distance:
400cm
HC-SR04
ESP32
WasteWeight:50.00
Location:
Kinathukadavu,Coimbatore
Sending payload:
{"DustbinContent":101.41,"WateWeight":50.00,"Location":"Kinathukadavu,Coimbatore"}
Publish ok


Node-RED
Deploy
Flow 1
debug
IBM IoT
connected
waste level
DWeight
location
condito
Waste Level
Waste Weight
Location:
Dustbin1 :
msg.payload
waste_magagement_1
IBM IoT1
waste_manegement_2
Maps
maps
UiMap
map - box
open - street - map


Node-RED Dashboard
Dustbin1
Location: Kinathukadavu,Coimbatore
Waste Weight
9
Waste Level
101.41
Dustbin2
Location: AnnaNgar,Chennai
Waste Weight
15
Waste Level
24.59
Dustbin Location
Coimbatore
Kinathukadavu
Pollachi
Location
Alert
Dustbin2 :
Dustbin not full
Dustbin1 :
Dustbin Full