

PROJECT DEVELOPEMENT PHASE DELIVERY OF SPRINT – 4

Date	19 November 2022
Team ID	PNT2022TMID46424
Project Name	Project - Smart Waste Management System For Metropolitan Cities

WOWKI OUTPUT :

The screenshot displays the WOKWI simulation environment. On the left, the Arduino IDE interface shows the following code:

```

1 #include <WiFi.h> // library for wifi
2 #include <PubSubClient.h> // library for MQTT
3 #include <LiquidCrystal_I2C.h>
4 LiquidCrystal_I2C lcd(0x27, 20, 4);
5
6 //----- credentials of IBM Accounts -----
7
8 #define Org "cbseji" // IBM organisation id
9 #define DEVICE_TYPE "abcd" // Device type mentioned in the watson iot platform
10 #define DEVICE_ID "1234" // Device ID mentioned in the watson iot platform
11 #define TOKEN "12345678" // token
12
13 //----- customise above values -----
14
15 char server[] = Org + ".messaging.internetofthings.ibmcloud.com"; // server name
16 char publishTopic[] = "iot-2/out/data/fat/json"; // topic name and type of event perform
17 char topic[] = "iot-2/cmd/led/fat/string"; // cmd Represent type and command is test
18 char authMethod[] = "use-token-auth"; // authentication method
19 char token[] = TOKEN;
20 char clientId[] = "d-" Org + "-" DEVICE_TYPE + "-" DEVICE_ID; //Client id
21
22 //-----
23
24 WiFiClient wifiClient; // creating instance for wifi client
25 PubSubClient client(server, 8083, wifiClient);
26
27 #define ECHO_PIN 12
28 #define TWIG_PIN 13
29 float dist;
30
31 void setup()
32 {
33   Serial.begin(115200);
34   pinMode(LED_BUILTIN, OUTPUT);
35   pinMode(TWIG_PIN, OUTPUT);
36   pinMode(ECHO_PIN, INPUT);
37   //pin mode
38   pinMode(34, INPUT);
39
40   //led pin
41   pinMode(25, OUTPUT);
42   pinMode(2, OUTPUT);
43   pinMode(4, OUTPUT);
44   pinMode(15, OUTPUT);
45
46   lcd.init();
47   lcd.backlight();
48

```

The simulation window on the right shows the device connected to WiFi with IP address 10.10.0.2 and successfully connecting to the MQTT client. The LCD display shows the following data:

```

Inches: 66.9
On 169.9

```

The screenshot displays the IBM Watson IoT Platform dashboard. The main view shows a list of devices with the following columns: Device ID, Status, Device Type, and Class ID. The device with ID 1234 is shown as Disconnected.

The "Recent Events" tab is selected, showing a table of events:

Event	Value	Format	Last
eventbatch11	{"randomNumber":81,"level":45,"weight":223}	json	a fe

The "Device Type: abcd" configuration window is open, showing the following details:

- Event type name: eventbatch11
- Schedule: 1 Every Minute
- Payload:

```

0 {
1   "randomNumber": random(0,100)
2   "level": random(0,100)
3   "weight": random(0,1000)
4 }
5

```

The "Upload a CSV file" button is visible at the bottom of the configuration window.

