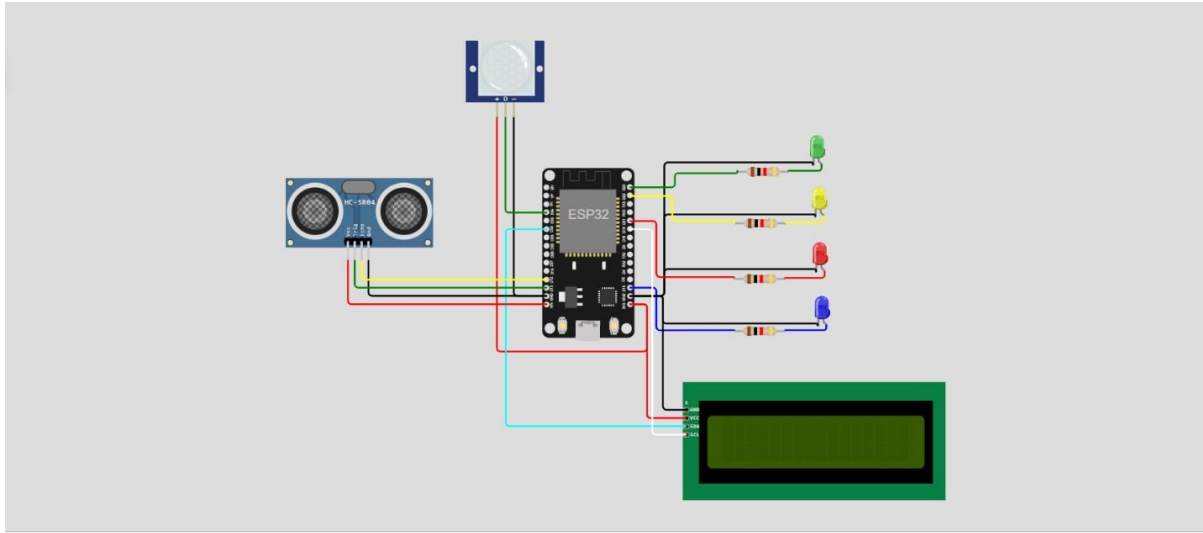


## SPRINT-2

Team id	PNT2022TMID48884
Project Name	Smart Waste Management System For Metropolitan Cities

### Circuit Diagram:



### Simulation with output:

WOKWI

esp32-blink.ino

```
1 #include <WiFi.h> // library for
2 #include <PubSubClient.h> // library for
3 #include <LiquidCrystal_I2C.h>
4 LiquidCrystal_I2C lcd(0x27, 20, 4);
5
6 //----- credentials of IBM Accounts -----
7
8 #define ORG "xnt2bc" // IBM organisatio
9 #define DEVICE_TYPE "sprint" // Device type mer
10 #define DEVICE_ID "sprint26" // Device ID mentio
11 #define TOKEN "Sprint26" // Token
12
13 //----- customise above values -----
14
15 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
16 char publishTopic[] = "iot-2/evt/data/fmt/json";
17 char topic[] = "iot-2/cmd/led/fmt/String";
18 char authMethod[] = "use-token-auth";
19 char token[] = TOKEN;
20 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
21
22 //-----
23
24 WifIClient wifIClient;
```

Simulation

02:46.563 100%

Sending distance: 31.98  
Publish OK  
No motion detected

Sending payload: {"High Alert!!":"31.98left" }  
Publish OK

Sending distance: 31.98  
Publish OK

## Simulation connected to IBM Watson:

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
data	{"Warning!!":"0.00left"}	json	a few seconds ago
data	{"High Alert!!":"71.96left"}	json	a few seconds ago
data	{"Warning!!":"0.00left"}	json	a few seconds ago
data	{"High Alert!!":"71.96left"}	json	a few seconds ago
data	{"Warning!!":"0.00left"}	json	a few seconds ago

0 Simulations running

## IBM Watson connected to Node-Red:

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow with an 'IBM IoT' node connected to a 'msg.payload' node. The 'IBM IoT' node is marked as 'connected'. The left sidebar shows the 'common' and 'function' node categories. The right sidebar shows the 'debug' console with a log of events.

**Edit ibmiot in node**

Delete Cancel Done

**Properties**

- Authentication: API Key
- API Key: sprint
- Input Type: Device Event
- Device Type: All or +
- Device Id: All or device id e.g. ab12cd231a21
- Event: All or +
- Format: All or json
- QoS: 0
- Name: IBM IoT
- Service: registered

Use the Input.Type property to configure this node to receive Events

☐ Enabled

**debug**

11/17/2022, 9:11:56 PM node: 91cb14268dab9ad3  
iot-2/types/print/ids/sprint26/ev/data/fmt/json : msg.payload : Object  
{ Warning!! : "0.00left" }

11/17/2022, 9:11:58 PM node: 91cb14268dab9ad3  
iot-2/types/print/ids/sprint26/ev/data/fmt/json : msg.payload : Object  
{ High Alert!! : "71.96left" }

11/17/2022, 9:11:59 PM node: 91cb14268dab9ad3  
iot-2/types/print/ids/sprint26/ev/data/fmt/json : msg.payload : Object  
{ Warning!! : "0.00left" }

11/17/2022, 9:12:00 PM node: 91cb14268dab9ad3  
iot-2/types/print/ids/sprint26/ev/data/fmt/json : msg.payload : Object  
{ Warning!! : "0.00left" }

11/17/2022, 9:12:02 PM node: 91cb14268dab9ad3  
iot-2/types/print/ids/sprint26/ev/data/fmt/json : msg.payload : Object  
{ Warning!! : "0.00left" }

Service Details - IBM Cloud

Node-RED: node-red-tpskl-2022-10-30.mybluemix.net

IBM Watson IoT Platform

node-red-tpskl-2022-10-30.mybluemix.net/red/#flow/bb8705feb0f167f5

Incognito

Node-RED

Flow 1

Flow 2

debug

filter nodes

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change

msg.payload

IBM IoT

connected

11/17/2022, 8:22:10 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ High Alert!!: "31.98left" }

11/17/2022, 8:22:11 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ object  
Warning!!: "0.00left" }

11/17/2022, 8:22:12 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ object  
High Alert!!: "31.98left" }

11/17/2022, 8:22:13 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ object  
Warning!!: "0.00left" }

11/17/2022, 8:22:14 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ High Alert!!: "31.99left" }

11/17/2022, 8:22:15 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ Warning!!: "0.00left" }

11/17/2022, 8:22:28 PM node: 91cb142d9da9ad3  
iot-2/typesprint/idsprint26/ev0data/fmtjson : msg.payload : Object  
{ High Alert!!: "31.99left" }

Service Details - IBM Cloud

Node-RED: node-red-tpskl-2022-10-30.mybluemix.net

IBM Watson IoT Platform

node-red-tpskl-2022-10-30.mybluemix.net/red/#flow/bb8705feb0f167f5

Incognito

Node-RED

Flow 1

Flow 2

debug

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msg.payload

IBM IoT

connected

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