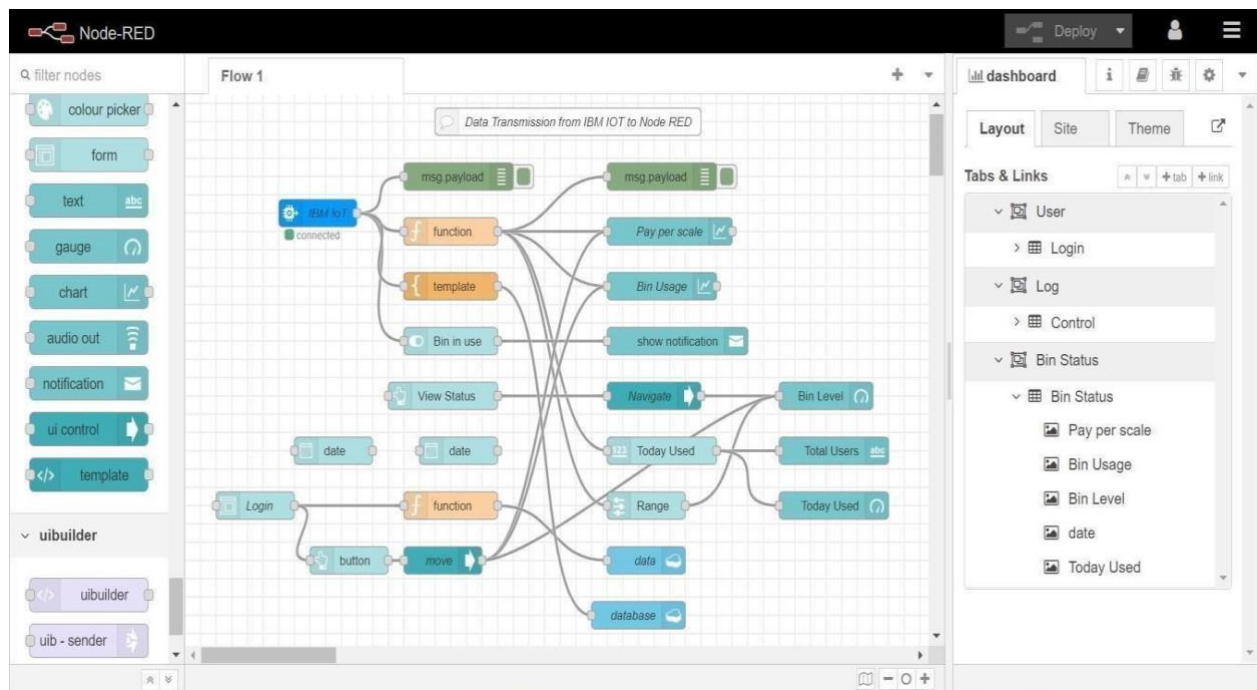
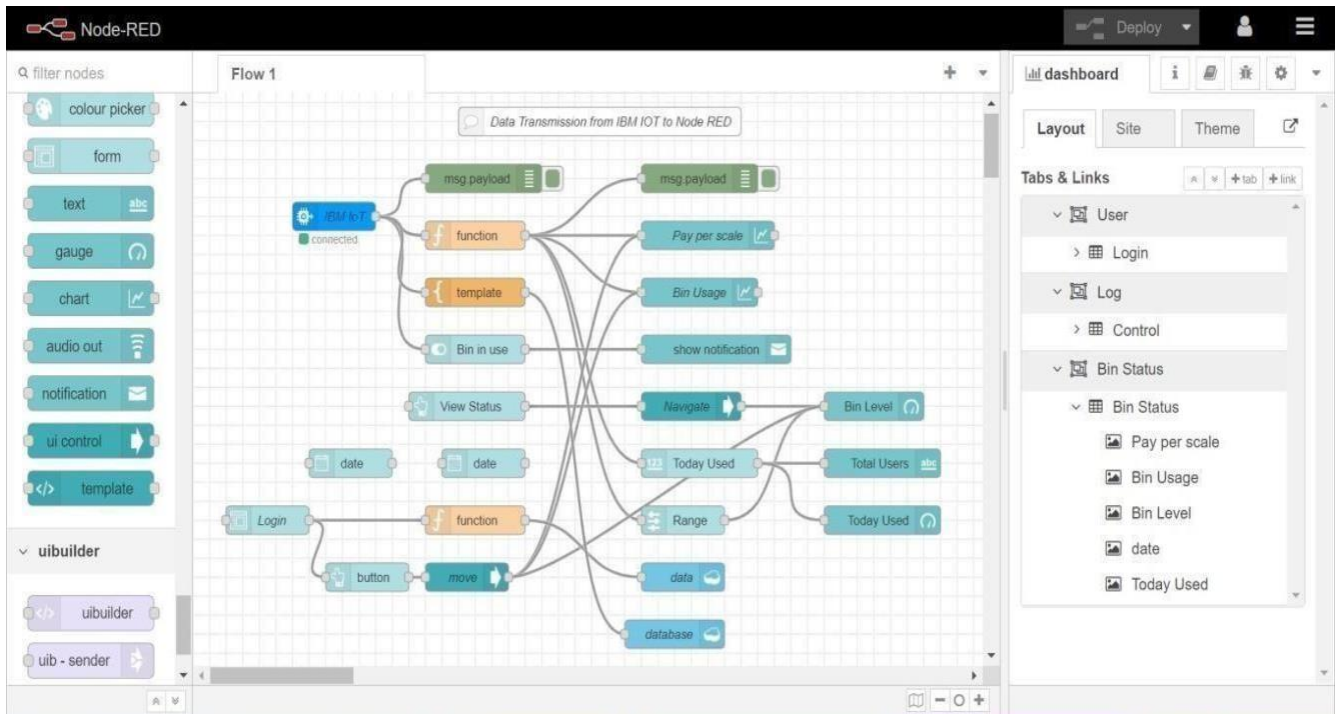


## *Delivery of Sprint – 4*

<b>TEAM ID</b>	<b>PNT2022TMID48693</b>
<b>PROJECT NAME</b>	<i>Project: Smart waste management system for metropolitan cities</i>

1. Node-RED Connection setup for data transmission from IBM Watson IOT platform to Node-RED dashboard.





2. Simulate Wokwi connection to transmit data from wokwi account to IBM Watson IOT platform and then to Node Red dashboard.

esp32-blink.ino

diagram.json

libraries.txt

Library Manager

```

177
178
179
180
181
182     if(cm <= 25)
183     {
184         digitalWrite(21,HIGH);
185         String payload = "{\"High_Alert\":\"";
186         payload += cm;
187         payload += " }";
188         Serial.print("\n");
189         Serial.print("Sending payload: ");
190         Serial.println(payload);
191
192         if (client.publish(publishTopic, (char*) payload.c_str())) // if
193         {
194             Serial.println("Publish OK");
195         }
196     }
197     if(cm <= 50)
198     {
199         digitalWrite(22,HIGH);
200         String payload = "{\"Warning\":\"";
201         payload += cm ;
202         payload += " }";
203         Serial.print("\n");

```

Simulation

00:35.846 99%

PIR Motion Sensor

Simulate motion

Sending distance: 26.94

Publish OK

Motion Detected

Lid Opened

High Alert!!!,Trash bin is about to be full

Lid Closed

### 3. Data transfer to Watson IOT platform.

Browse

Action

Device Types

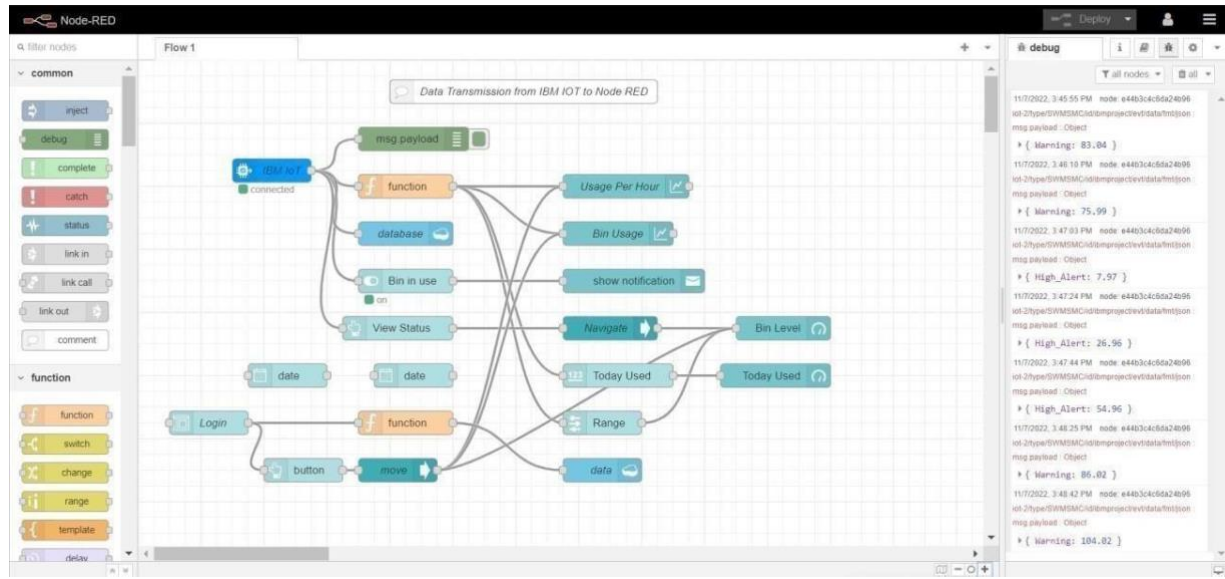
Interfaces

Add Device

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":28.95}	json	a few seconds ago
data	{"Warning":28.95}	json	a few seconds ago
data	{"Warning":49.98}	json	a minute ago
data	{"Warning":49.98}	json	a minute ago
data	{"Warning":11.03}	json	a minute ago

### 4. Data transfer from IBM Watson IOT platform and wokwi to Node red.



## 5 . Storing database in IBM cloudant DB.

Databases

Database name

Create Database

{ } JSON

Your Databases

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	<div></div> <div></div> <div></div>
noderedwjlidy20221105	37.4 KB	4	No	<div></div> <div></div> <div></div>
sample	59.4 KB	351	No	<div></div> <div></div> <div></div>
sensor_data	15.7 KB	90	No	<div></div> <div></div> <div></div>

Showing 1–4 of 4 databases. Databases per page 20

1

id	key	value
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b40891e13c6c...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb0460bc16cfab0...
1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-7226f08794cd47b7c...
1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-1bbdd9a985bd56cf9...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f08794cd47b7c...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ead57f039e...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bbdd9a985bd56cf9...
298ed6fhd9b3b815f5ac7c061e...	298ed6fhd9b3b815f5ac7c061e...	{ "rev": "1-4e7240f6e5307a1h9...

Showing document 1 - 20. Documents per page: 20

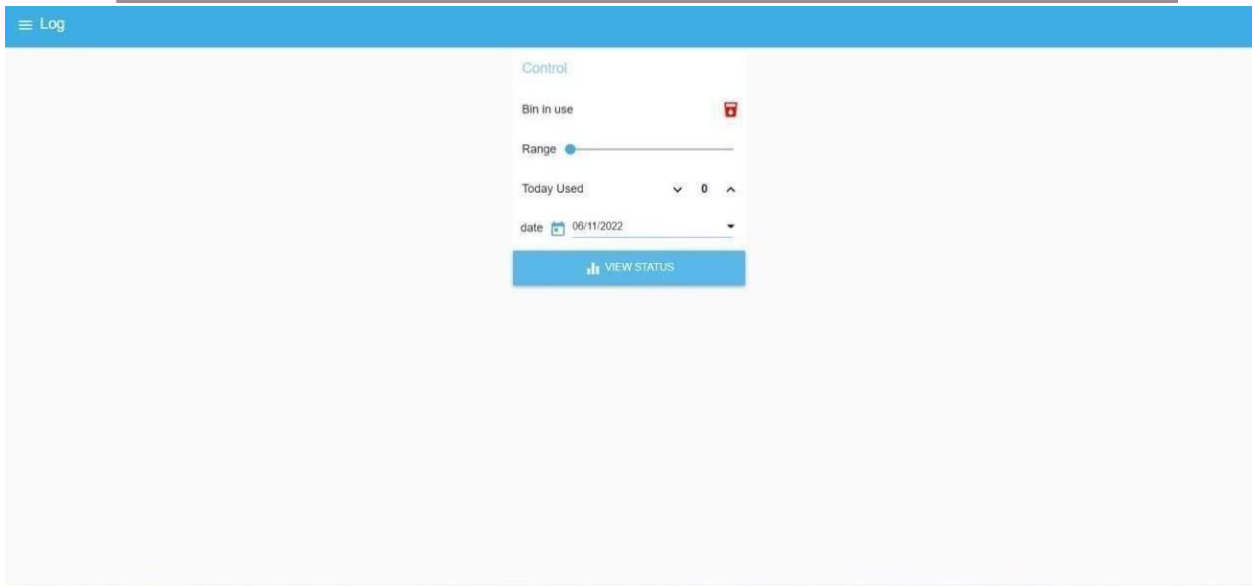
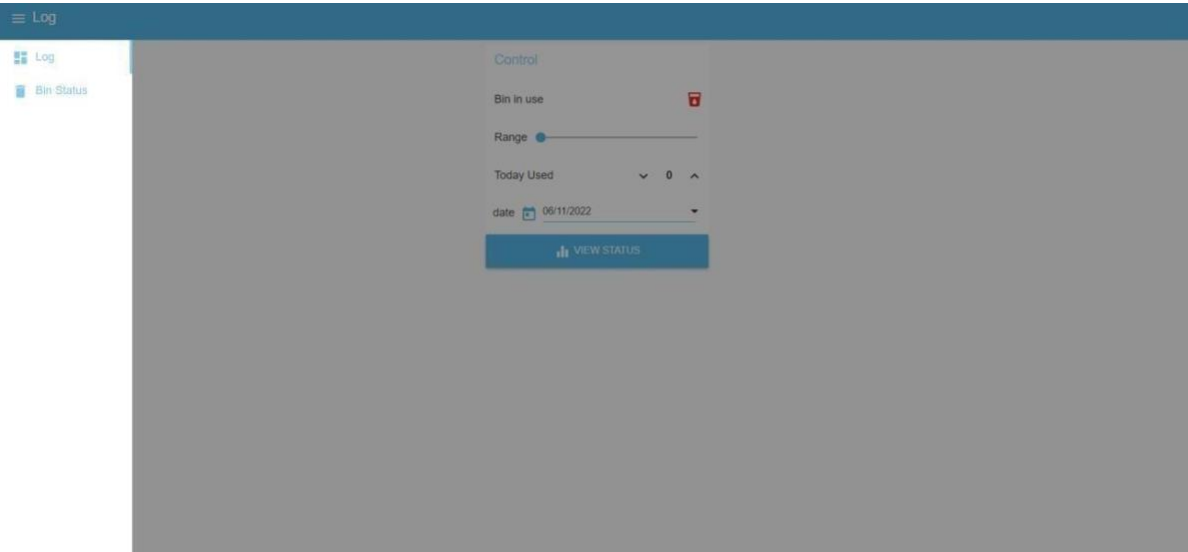
## 6. Data is stored in JSON format

```

1 {
2   "_id": "0198213c192cb2c244cc2433f1802b91",
3   "_rev": "1-cde2dd17c519394df774730c495f8b",
4   "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/fmt/json",
5   "payload": {
6     "Warning!!": "244.971left"
7   },
8   "deviceId": "ibmproject",
9   "deviceType": "SWMSMC",
10  "eventType": "data",
11  "format": "json"
12 }

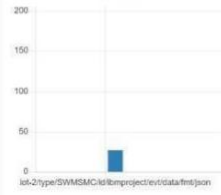
```

## 7. Web UI



Bin Status

Bin Level



Today Used



Bin Level



date 06/11/2022

Today Used

