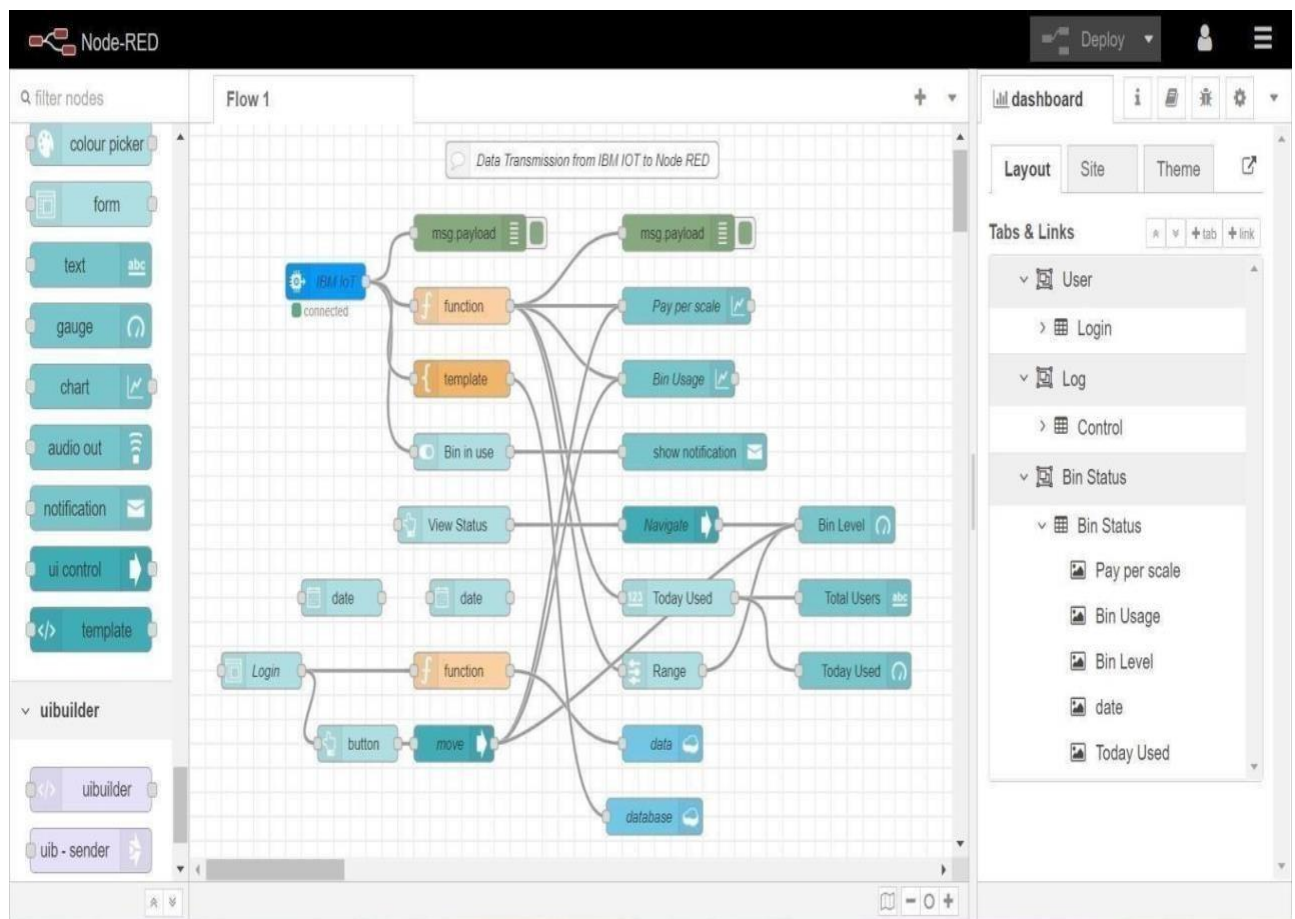
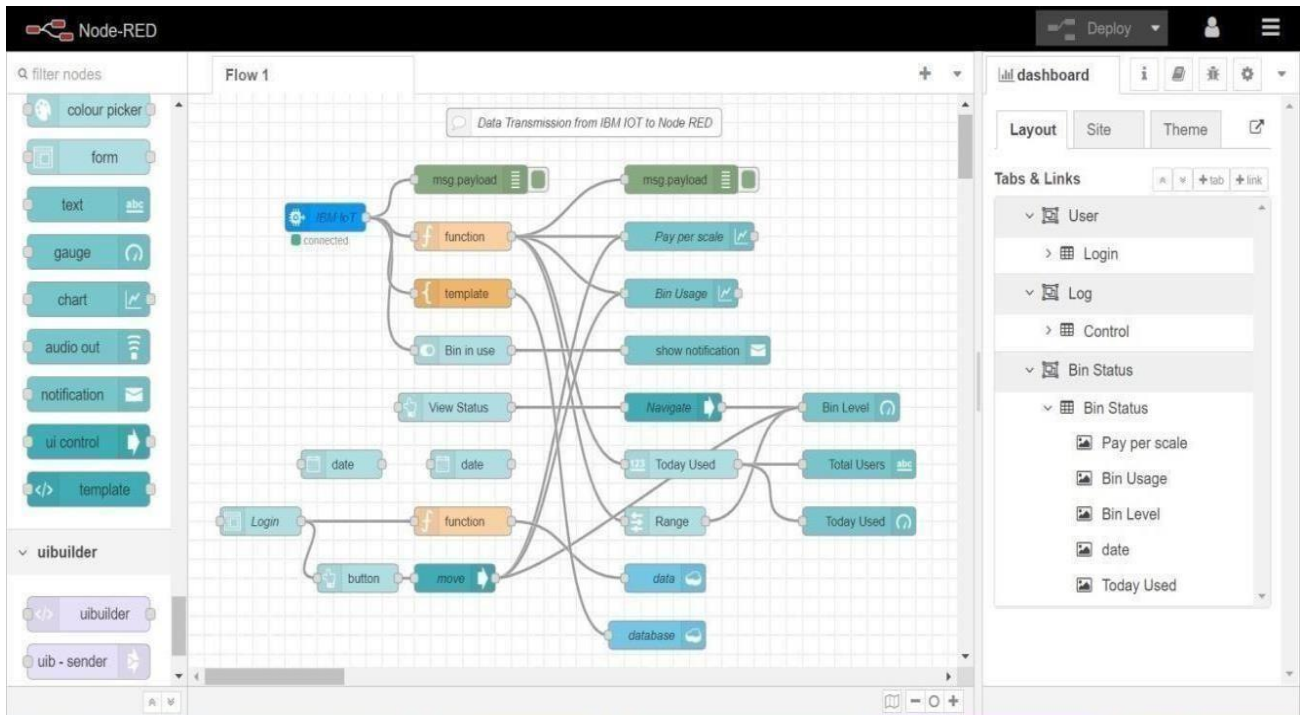


## Delivery of Sprint – 4

<b>Date</b>	<b>10 Nov 2022</b>
<b>Team ID</b>	<b>PNT2022TMID50923</b>
<b>Project Name</b>	<b>Smart Waste Management System For Metropolitan Cities</b>

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





Simulate Wokwi connection to transmit data from wokwi account to IBM WatsonIoT platform and then to Node Red dashboard

esp32-blink.ino

```

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

## Data transfer to Watson IOT platform

The screenshot shows the IBM Watson IoT Platform interface. At the top, there are tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A blue 'Add Device' button is in the top right. Below the tabs, a message states: 'The recent events listed show the live stream of data that is coming and going from this device.' Below this is a table with the following data:

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

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

The screenshot shows the Node-RED interface with a flow titled 'Data Transmission from IBM IoT to Node RED'. The flow starts with an 'IBM IoT' node (connected) that feeds into a 'msg.payload' node. This node then branches into several parallel paths, each leading to a different output node: 'Usage Per Hour', 'Bin Usage', 'Bin in use', 'View Status', 'Today Used', 'Range', and 'data'. Each output node is connected to a corresponding 'function' node. The 'function' nodes are further connected to various other nodes, including 'Login', 'button', 'move', 'date', 'show notification', 'Navigate', 'Bin Level', and 'Today Used'. The right sidebar shows a 'debug' console with a list of messages received from the IoT platform, including warnings and high alerts.

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></div></div>
noderedwjldy20221105	37.4 KB	4	No	<div><div></div><div></div><div></div></div>
sample	59.4 KB	351	No	<div><div></div><div></div><div></div></div>
sensor_data	15.7 KB	90	No	<div><div></div><div></div><div></div></div>

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

« 1 »

< sensor\_data :

Document ID ▾ ⚙️ Options {} JSON 📖 🔔

---

All Documents +

Query

Permissions

Changes

Design Documents +

☐ Table
**Metadata**
{ } JSON

	id	key	value
<input type="checkbox"/> 📄	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df..." }
<input type="checkbox"/> 📄	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b40891e13c6c..." }
<input type="checkbox"/> 📄	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df..." }
<input type="checkbox"/> 📄	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb0460bc16ctab0..." }
<input type="checkbox"/> 📄	1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-7226f0879acd47b7c..." }
<input type="checkbox"/> 📄	1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-1bbdd9a985bd56cf9..." }
<input type="checkbox"/> 📄	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f0879acd47b7c..." }
<input type="checkbox"/> 📄	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ecad57f039e..." }
<input type="checkbox"/> 📄	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bbdd9a985bd56cf9..." }
<input type="checkbox"/> 📄	298ed6fhd9b3b815f5ac7c061e...	298ed6fhd9b3b815f5ac7c061e...	{ "rev": "1-de72d0f6ae307a1b9..." }

Create Document

Showing document 1 - 20.
Documents per page: 20 ▾
< >

Log Out

Data is stored in JSON format

↔

sensor\_data > 0198213c192cb2c244cc2433f1802b91

{ } JSON

📖

🔔

✔ Save Changes

Cancel

⬆️ Upload Attachment

🔄 Clone Document

🗑️ Delete

1 - {

2    "\_id": "0198213c192cb2c244cc2433f1802b91",

3    "\_rev": "1-cde2dd17c519394dfb774730c495f8b",

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 }


Log Out

≡ Log

Log

Bin Status

Control

Bin in use 


Range

Today Used 

▼ 0 ▲


date 

📅 06/11/2022 ▼

 VIEW STATUS

≡ Log

Control

Bin in use 


Range

Today Used 

▼ 0 ▲

date 

📅 06/11/2022 ▼

 VIEW STATUS

