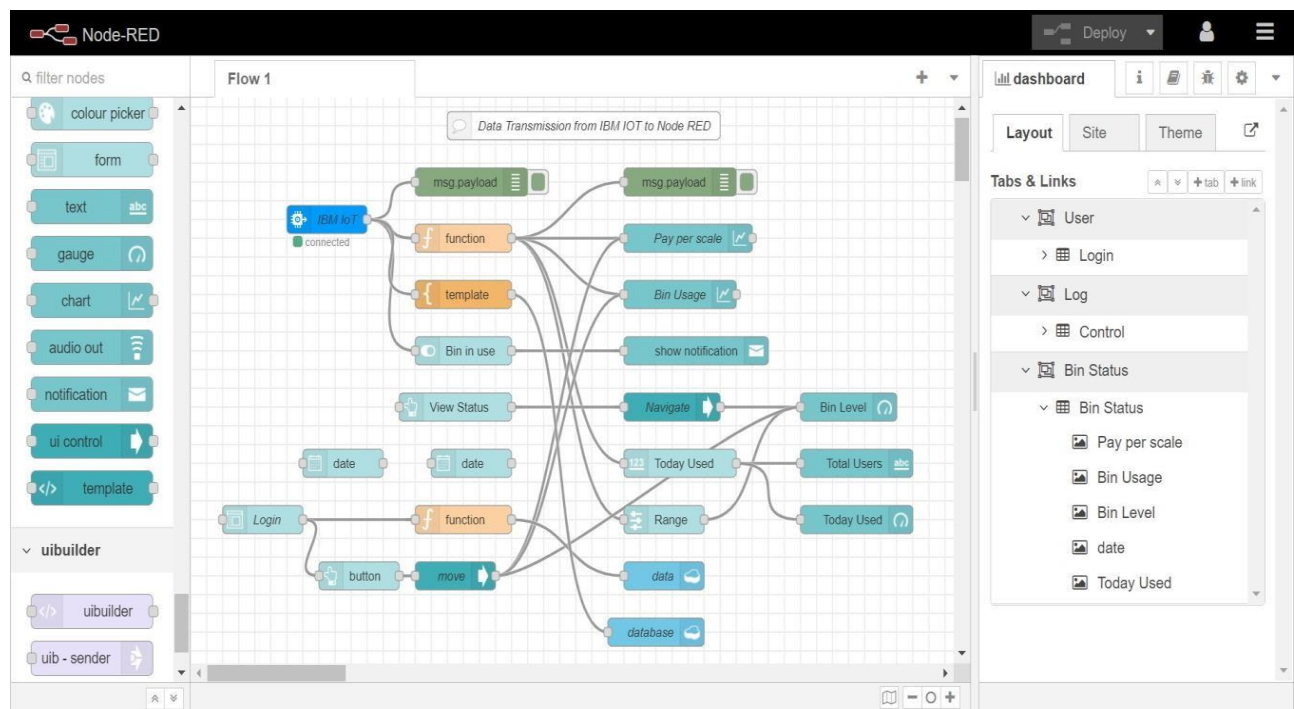


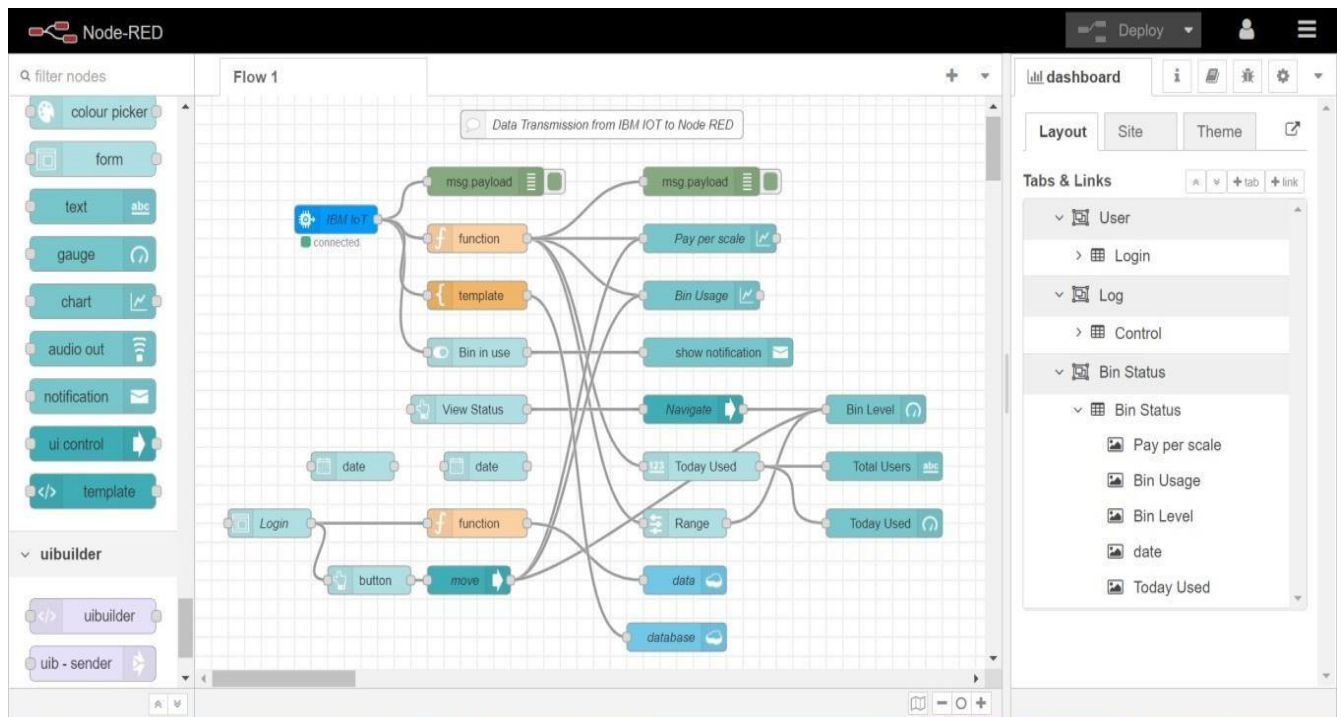
Delivery of Sprint – 4

Web UI Design and Deploy

Date	8 November 2022
Team ID	PNT2022TMID14871
Project Name	Smart Waste Management for Metropolitan Cities

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()))
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

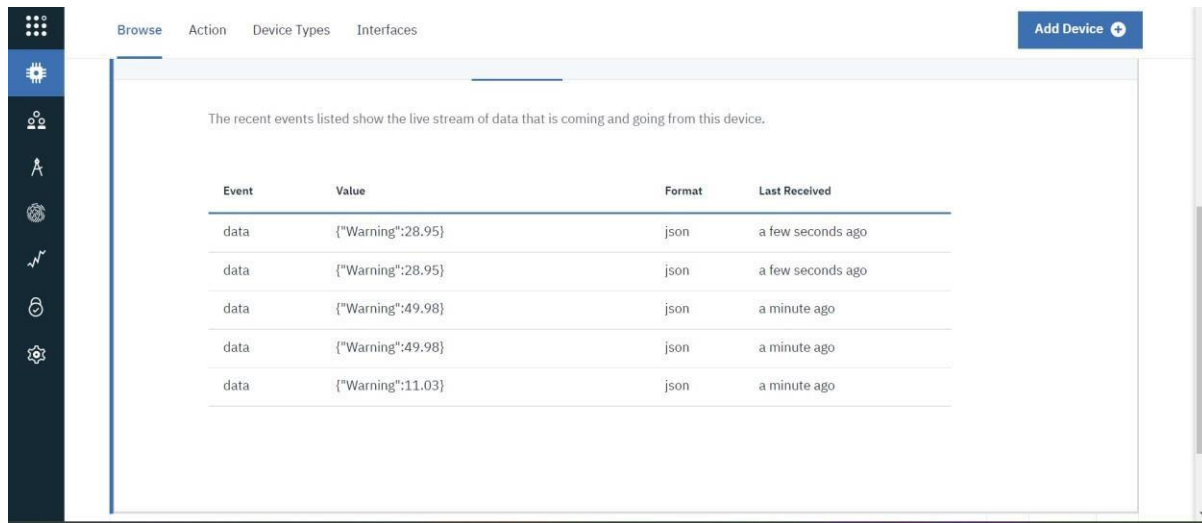
Motion Detected

Lid Opened

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

Lid Closed

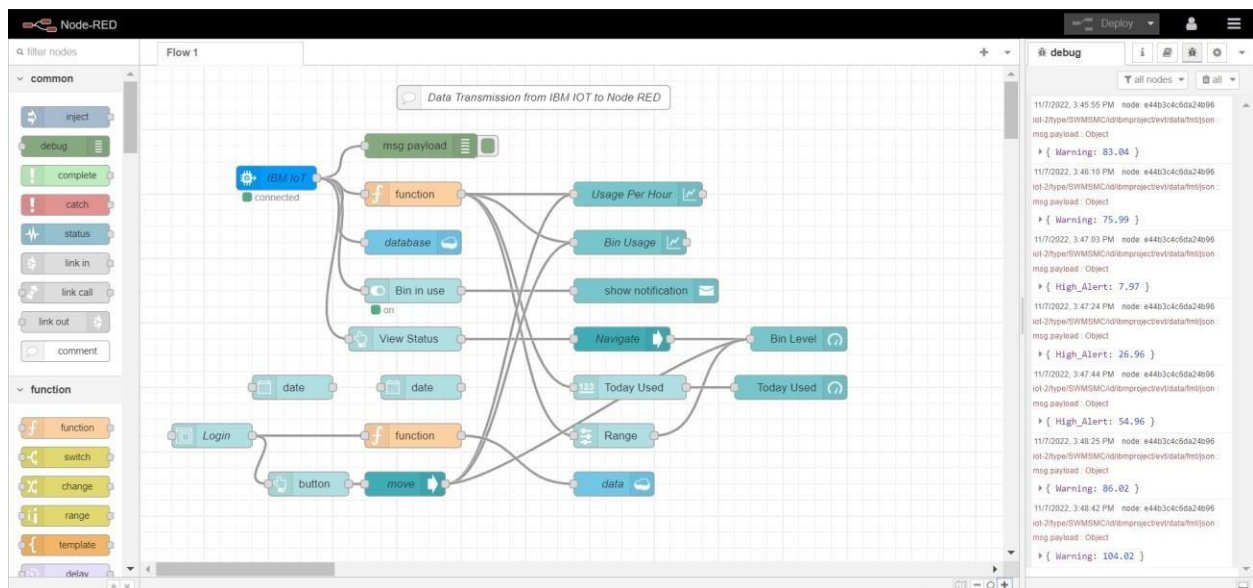
3. Data transfer to Watson IOT platform.



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 message 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

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



5 . Storing database in IBM cloudant DB.

The screenshot shows the IBM Cloudant Databases interface. On the left is a dark sidebar with navigation icons. The main header is 'Databases' with a 'Database name' dropdown, a 'Create Database' button, and icons for JSON, a book, and a bell. Below the header is a section titled 'Your Databases' containing a table with the following data:

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	[Icons for view, lock, delete]
noderedwjldy20221105	37.4 KB	4	No	[Icons for view, lock, delete]
sample	59.4 KB	351	No	[Icons for view, lock, delete]
sensor_data	15.7 KB	90	No	[Icons for view, lock, delete]

At the bottom right, it says 'Showing 1-4 of 4 databases. Databases per page: 20' with pagination controls.

The screenshot shows the details for the 'sensor_data' database. The left sidebar has a 'sensor_data' header and a menu with 'All Documents', 'Query', 'Permissions', 'Changes', and 'Design Documents'. The main area has a 'Document ID' dropdown, 'Options', and icons for JSON, a book, and a bell. Below this is a tabbed interface with 'Table', 'Metadata', and 'JSON' tabs, and a 'Create Document' button. The 'Table' tab is active, showing a table with columns 'id', 'key', and 'value'. The table contains 10 rows of document data. At the bottom right, it says 'Showing document 1 - 20. Documents per page: 20' with pagination controls.

6. Data is stored in JSON format

↔

sensor_data > 0198213c192cb2c244cc2433f1802b91

{}JSON

🔔

✔ Save Changes Cancel

📎 Upload Attachment

🔄 Clone Document

🗑 Delete

1-
2
3
4
5
6
7
8
9
10
11
12

```
{
  "_id": "0198213c192cb2c244cc2433f1802b91",
  "_rev": "1-cde2dd17c519394dfcb774730c495f8b",
  "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/fmt/json",
  "payload": {
    "Warning!!": "244.971left"
  },
  "deviceId": "ibmproject",
  "deviceType": "SWMSMC",
  "eventType": "data",
  "format": "json"
}
```

📊

🗄

🔍

👤

🔊

📖

📁

Log Out

7. Web UI

☰ Log

📊 Log

📁 Bin Status

Control

Bin in use

Range

Today Used

date

VIEW STATUS

Control

Bin in use



Range



Today Used

0

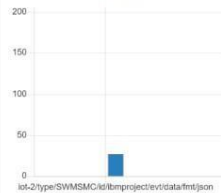
date

06/11/2022

VIEW STATUS

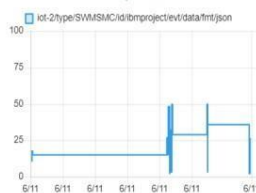
Bin Status

Bin Level



date 06/11/2022

Today Used



Bin Level



Today Used



