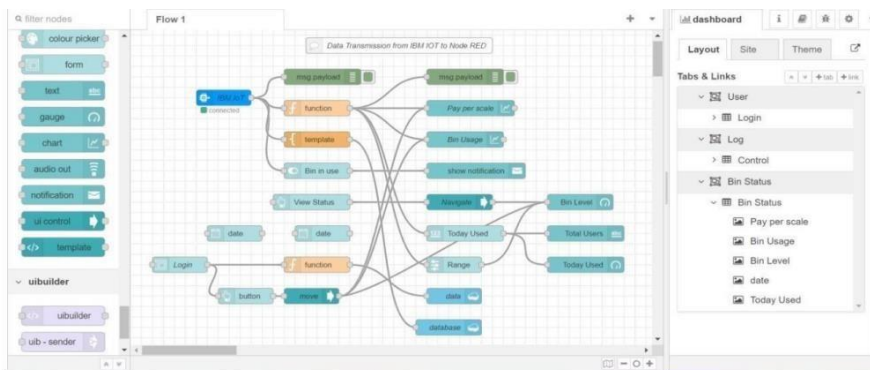
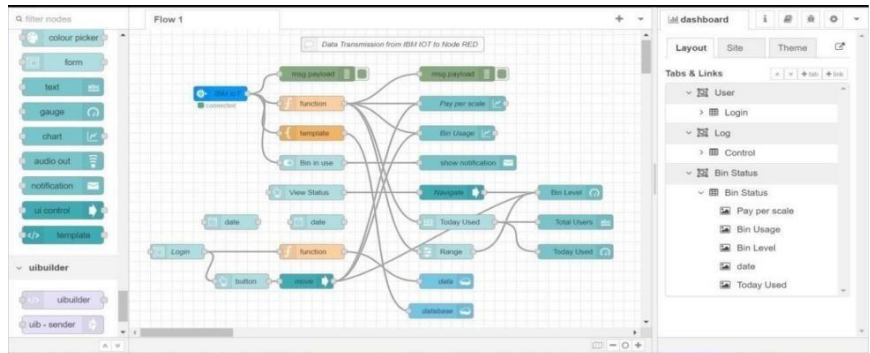


SPRINT 3

Date	11 November 2022
Team ID	PNT2022TMID26095
Project Name	Smart Waste Management System for Metropolitan cities

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 Watson IOT 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

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.

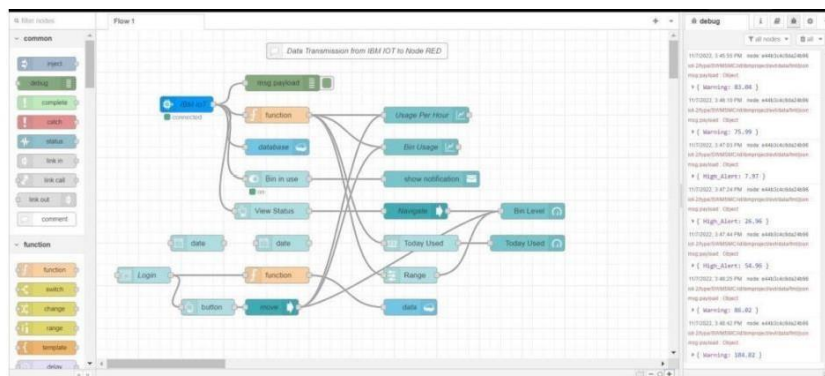
BrowseActionDevice TypesInterfaces

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

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



Storing database in IBM cloudant DB.

The screenshot shows the MongoDB Cloudant dashboard. At the top, the browser address bar displays the URL: `ee6aeb4a-3006-499e-940e-af19edf953bf-bluemix.cloudant.com/dashboard.html?_all_dbs`. The dashboard header includes a 'Database name' dropdown, a 'Create Database' button, and a JSON icon. Below the header, the section 'Your Databases' contains a table with the following data:

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	[Add] [Lock] [Delete]
moderatedwldy20221105	37.4 KB	4	No	[Add] [Lock] [Delete]
sample	59.4 KB	351	No	[Add] [Lock] [Delete]
sensor_data	15.7 KB	90	No	[Add] [Lock] [Delete]

At the bottom of the dashboard, a status bar indicates 'Showing 1-4 of 4 databases. Databases per page 20' with navigation controls.

Data is stored in JSON format

sensor_data > 0198213c192cb2c244cc2433f1802b91

{JSON}

Save ChangesCancel

Upload AttachmentClone DocumentDelete

1

2

3

4

5

6

7

8

9

10

11

12

```
1 {
2   "_id": "0198213c192cb2c244cc2433f1802b91",
3   "_rev": "1-cde2d617c519394dfeb774738e405f8b",
4   "topic": "i2t-2/type/SW5HC/id/ibmproject/evt/data/fmt/json",
5   "payload": {
6     | "Warning!!": "244.971eft"
7   },
8   "deviceId": "ibmproject",
9   "eventType": "SW5HC",
10  "eventType": "data",
11  "format": "json"
12 }
```

Log Out

