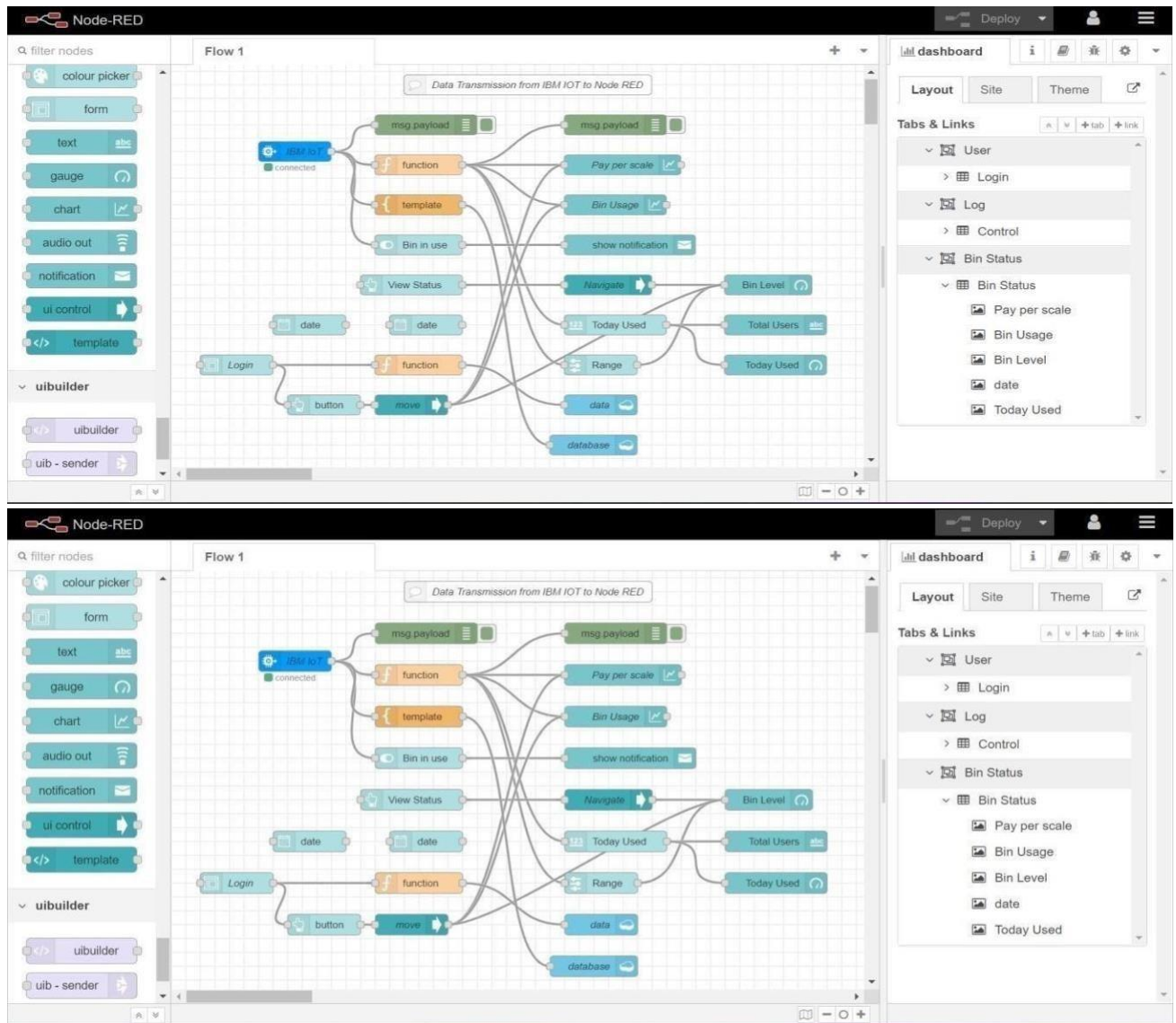


Delivery of Sprint – 3

Node Red Connection to IBM Cloudant

Team ID	PNT2022TMID22555
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())) // 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.

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

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

sensor_data
Document ID ▾
 Options
{ } JSON

- All Documents +
- Query
- Permissions
- Changes
- Design Documents +

Table
Metadata
{ } JSON

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	id	key	value
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df..." }
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b4089e1e13c6c..." }
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df..." }
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb0460bc16cfab0..." }
<input type="checkbox"/>	1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-7226f08794cd47b7c..." }
<input type="checkbox"/>	1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-1bbdd9a985bd56cf9..." }
<input type="checkbox"/>	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f08794cd47b7c..." }
<input type="checkbox"/>	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ecad57f039e..." }
<input type="checkbox"/>	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bbdd9a985bd56cf9..." }
<input type="checkbox"/>	298ed6fhd9h3b815f5ac7c061e...	298ed6fhd9h3b815f5ac7c061e...	{ "rev": "1-4e7240f6e5307a1h9..." }

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6. Data is stored in JSON format

```
1 {
2   "_id": "0198213c192cb2c244c2433f1802b91",
3   "_rev": "1-cde2dd17c519394dfeb774730c495f8b",
4   "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/fmt/json",
5   "payload": {
6     | "Warning!!": "244.97left"
7   },
8   "deviceId": "ibmproject",
9   "deviceType": "SWMSMC",
10  "eventType": "data",
11  "format": "json"
12 }
```