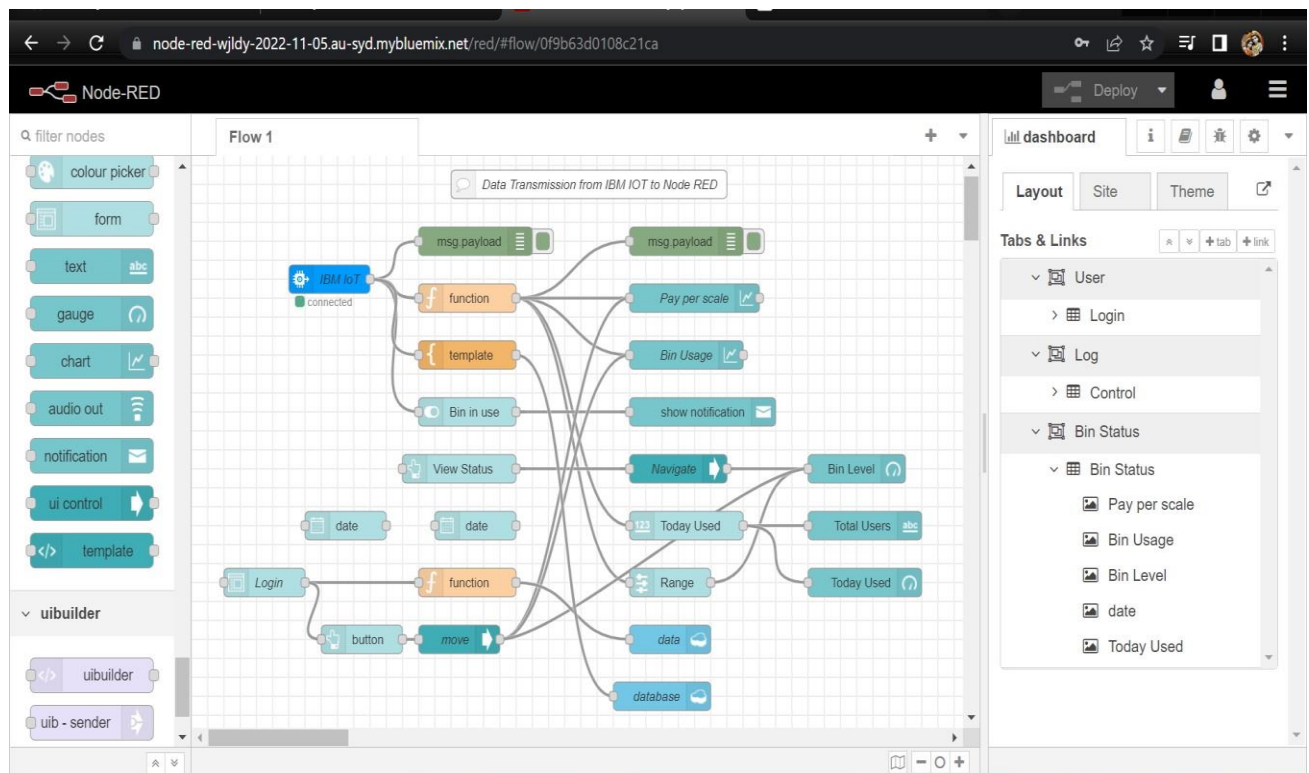


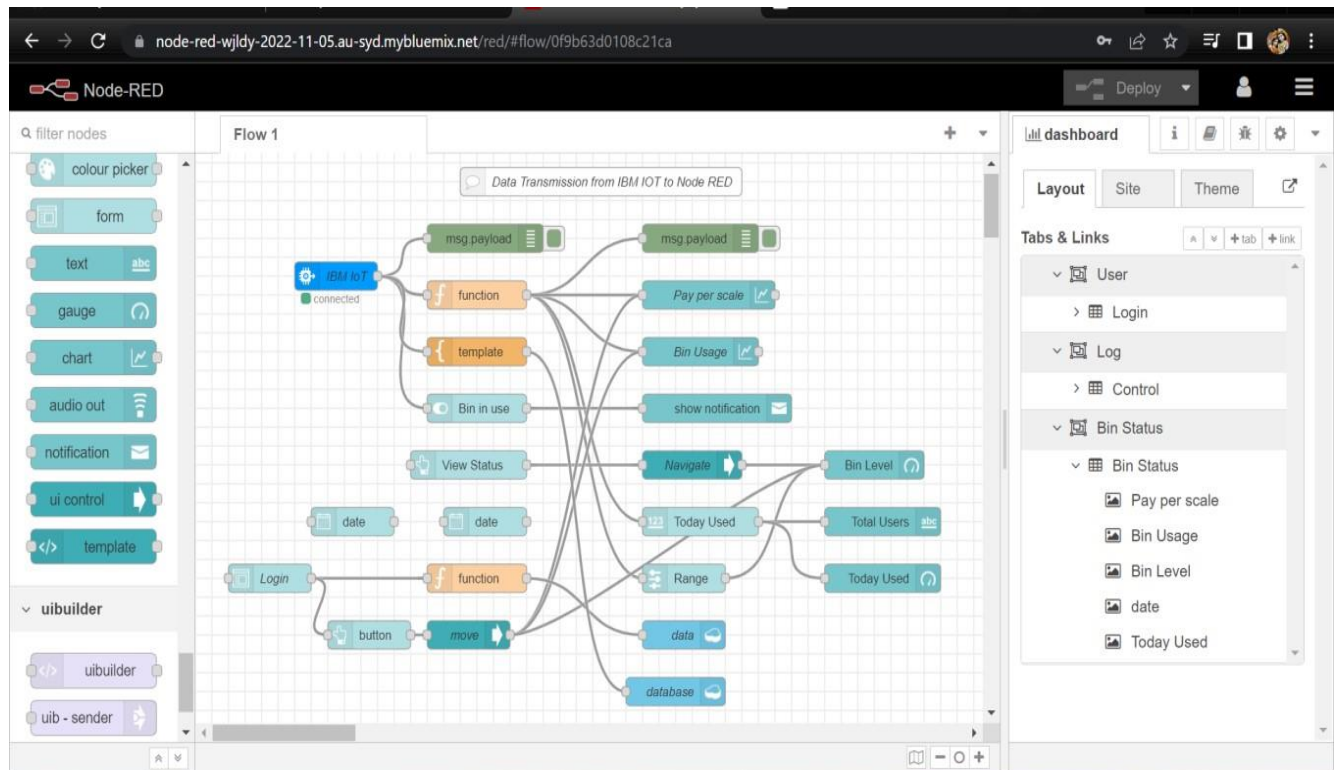
Delivery of Sprint – 4

Web UI Design and Deploy

| | |
|--------------|--|
| Date | 10 November 2022 |
| Team ID | PNT2022TMID43558 |
| Project Name | Smart Waste Management for Metropolitan Cities - IOT |

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.

```

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

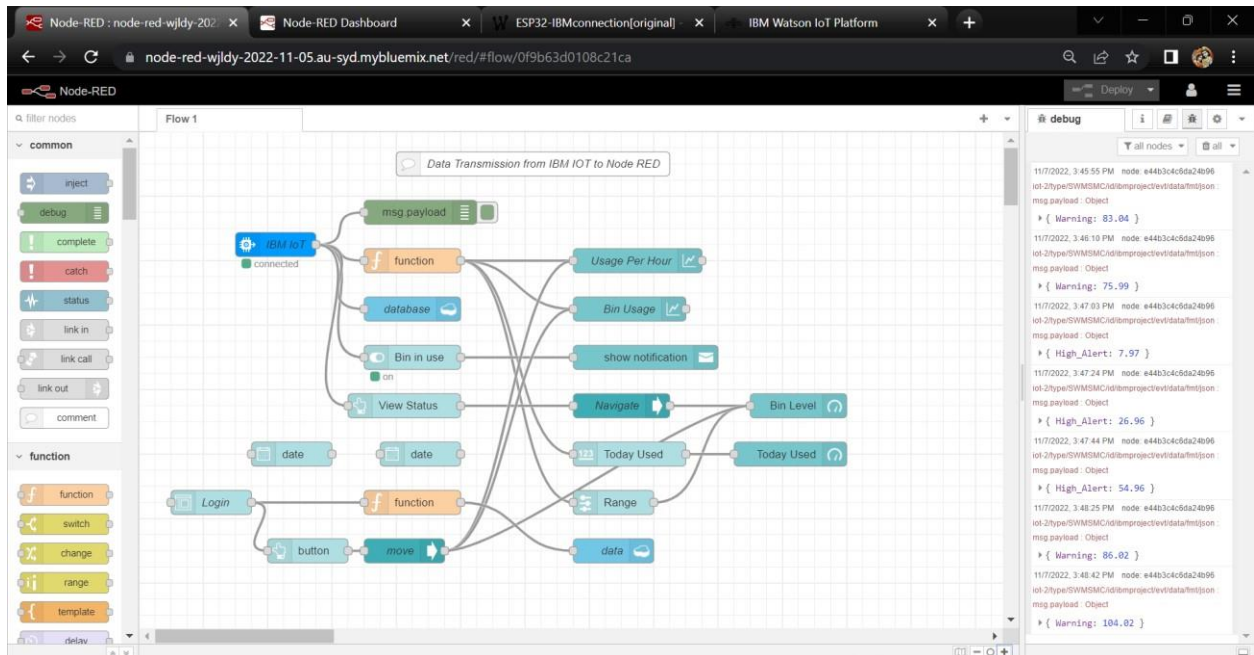
Sending distance: 26.94
 Publish OK
 Motion Detected
 Lid Opened
 High Alert!!!,Trash bin is about to be full
 Lid Closed

3. Data transfer to Watson IOT platform.

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.

← → C ee6aeb4a-3006-499e-940e-af19edf953bf-bluemix.cloudant.com/dashboard.html#/all_dbs

Databases Database name Create Database {} JSON

Your Databases

| Name | Size | # of Docs | Partitioned | Actions |
|----------------------|---------|-----------|-------------|---|
| login_credentials | 13.7 KB | 111 | No |    |
| noderedwjldy20221105 | 37.4 KB | 4 | No |    |
| sample | 59.4 KB | 351 | No |    |
| sensor_data | 15.7 KB | 90 | No |    |

Showing 1-4 of 4 databases. Databases per page 20 « 1 »











Log Out

← → C ee6aeb4a-3006-499e-940e-af19edf953bf-bluemix.cloudant.com/dashboard.html#/database/sensor_data/_all_docs

sensor_data Document ID Options {} JSON

All Documents + Query Permissions Changes Design Documents +

Table Metadata {} JSON Create Document

| | 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-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"/> |  298ed6fhd9b3b815f5ac7c061e... | 298ed6fhd9b3b815f5ac7c061e... | { "rev": "1-4e7240f6e5307a1h9... |

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

Log Out

6. Data is stored in JSON format

ee6aeb4a-3006-499e-940e-af19edf953bf-bluemix.cloudant.com/dashboard.html#database/sensor_data/0198213c192cb2c244cc2433f1802b91

sensor_data > 0198213c192cb2c244cc2433f1802b91

Save Changes Cancel Upload Attachment Clone Document Delete

```
1 {
2   "_id": "0198213c192cb2c244cc2433f1802b91",
3   "_rev": "1-cde2dd17c519394dfcb774730c495f8b",
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 }
```

Log Out


7. Web UI

node-red-wjldy-2022-11-05-au-syd.mybluemix.net/ui/#/0?socketid=mTvmznbl9ri5aUmAACX

Log

Bin Status


Control

Bin in use 

Range

Today Used

date

 VIEW STATUS

