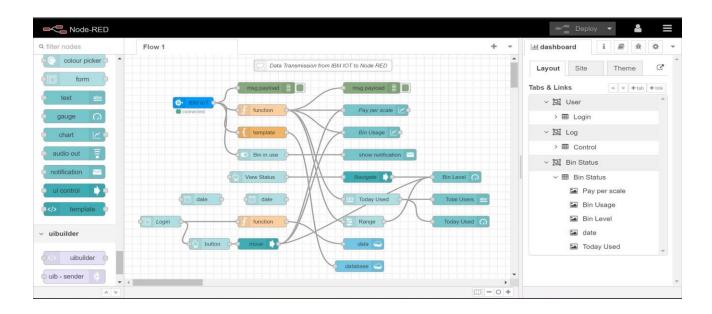
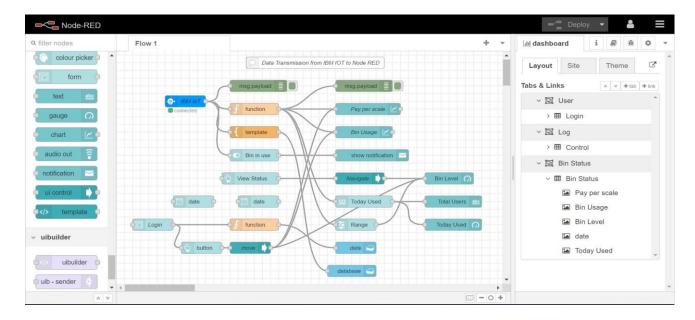
SPRINT-3

Node Red Connection to IBM Cloudant

Date	14 November 2022
Team ID	PNT2022TMID14224
Project Name	Smart Waste Management
_	System for Metropolitan
	Cities

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

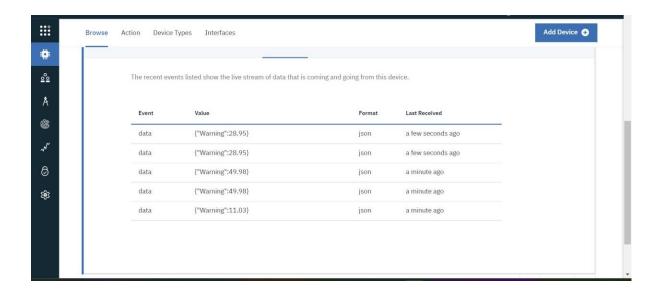




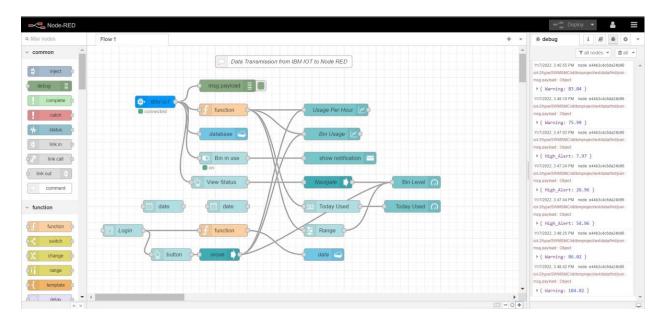
2.Simulate Wokwi connection to transmit data from wokwi account to IBM Watson IOT platform and then to Node Red dashboard.

```
esp32-blink.ino
                 diagram.json libraries.txt Library Manager ▼
                                                                                                  Simulation
 177
                                                                                                                                                                         Ō00:35.846 (₹)99%
 178
 179
 180
 182
          if(cm <= 25)
 183
       digitalWrite(21,HIGH);
String payload = "{\"High_Alert\":";
 185
       payload += cm;
payload += " }";
Serial.print("\n");
Serial.print("Sending payload: ");
 186
 188
 189
        Serial.println(payload);
 191
        if (client.publish(publishTopic, (char*) payload.c_str()))
 192
 193
        Serial.println("Publish OK");
 194
                                                                                              Sending distance: 26.94
 196
                                                                                              Publish OK
        if(cm <= 50)
 197
                                                                                              Motion Detected
                                                                                              Lid Opened
       digitalWrite(22,HIGH);
String payload = "{\"Warning\":";
 199
                                                                                              High Alert!!!, Trash bin is about to be full
        payload += cm ;
payload += " }";
Serial.print("\n");
 202
                                                                                                                                                                               <u>₩</u> II 🗖
```

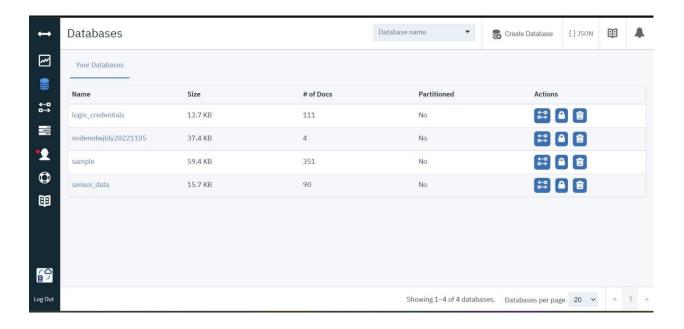
3. Data transfer to Watson IOT platform.

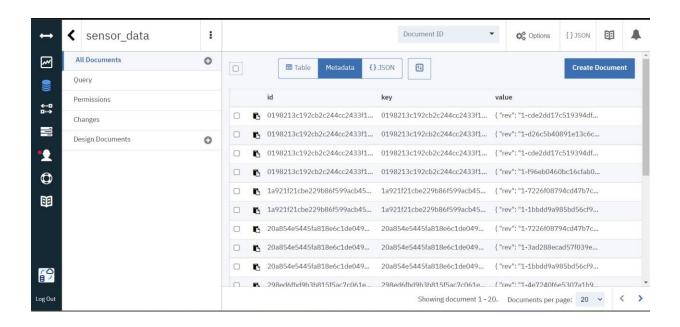


4. Data transfer from IBM Watson IOT platform and wokwi to Node red.



5. Storing database in IBM cloudant DB.





6.Data is stored in JSON format

```
sensor_data > 0198213c192cb2c244cc2433f1802b91
                                                                                                                                   {}JSON
                                                                                                                                             印
~

    ✓ Save Changes

                                                                                                           O Upload Attachment C Clone Document Delete
"_id": "0198213c192cb2c244cc2433f1802b91",
4...□
             "_rev": "1-cde2dd17c519394dfeb774730c495f8b",
             "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/fmt/json",
             "payload": {
=
              "Warning!!": "244.97left"
             1.
             "deviceId": "ibmproject",
             "deviceType": "SWMSMC",
0
             "eventType": "data",
             "format": "json"
        11
12 }
E O
```