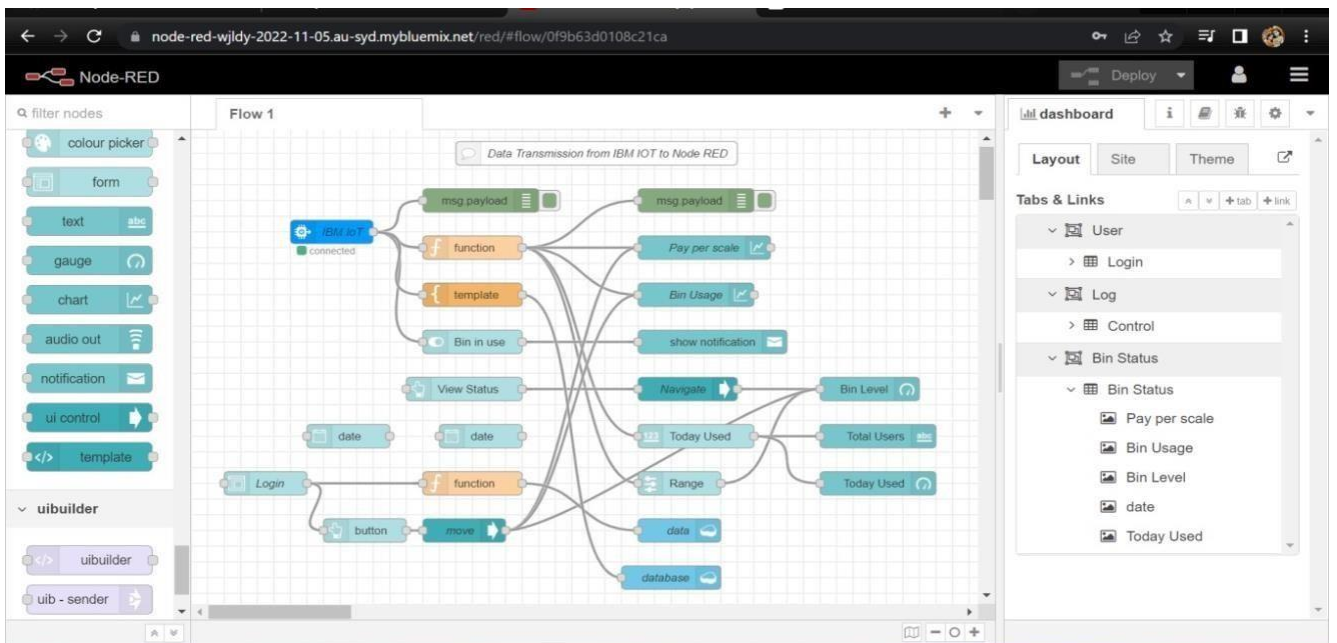
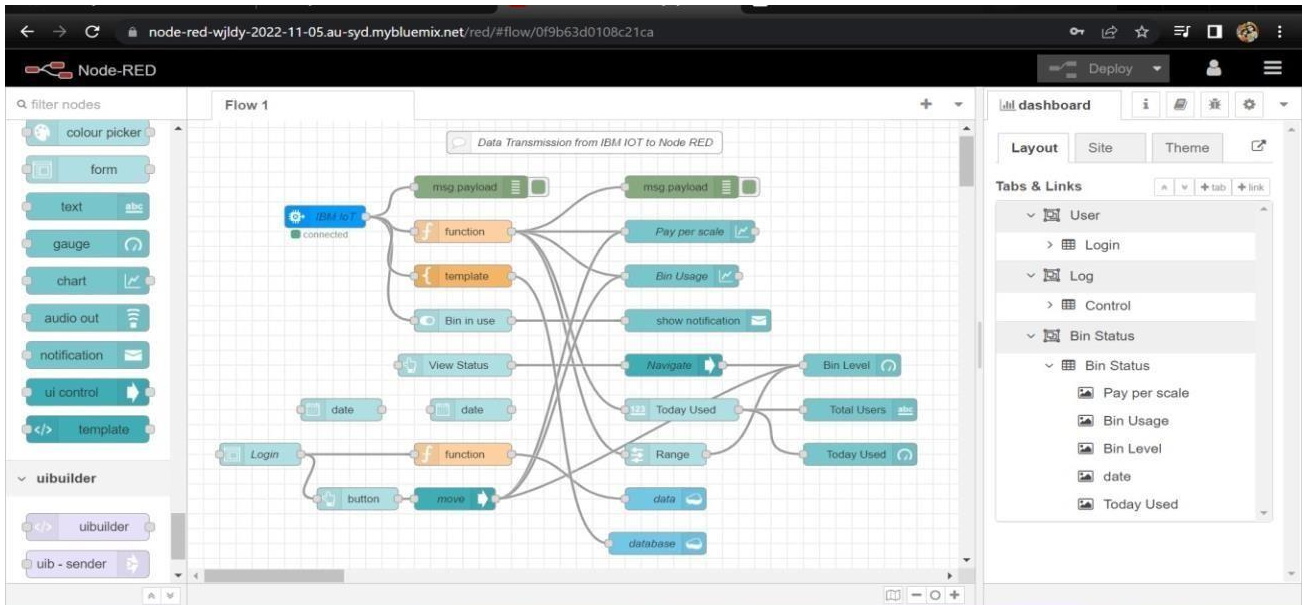


Delivery of Sprint – 3

Node Red Connection to IBM Cloudant

Date	5 November 2022
Team ID	PNT2022TMID28953
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.

The screenshot shows the Wokwi IDE interface. On the left, the code for `esp32-blink.ino` is visible, featuring logic for distance measurement and alert generation. On the right, the simulation environment displays a PIR Motion Sensor module. The console output shows the following sequence of events:

```

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

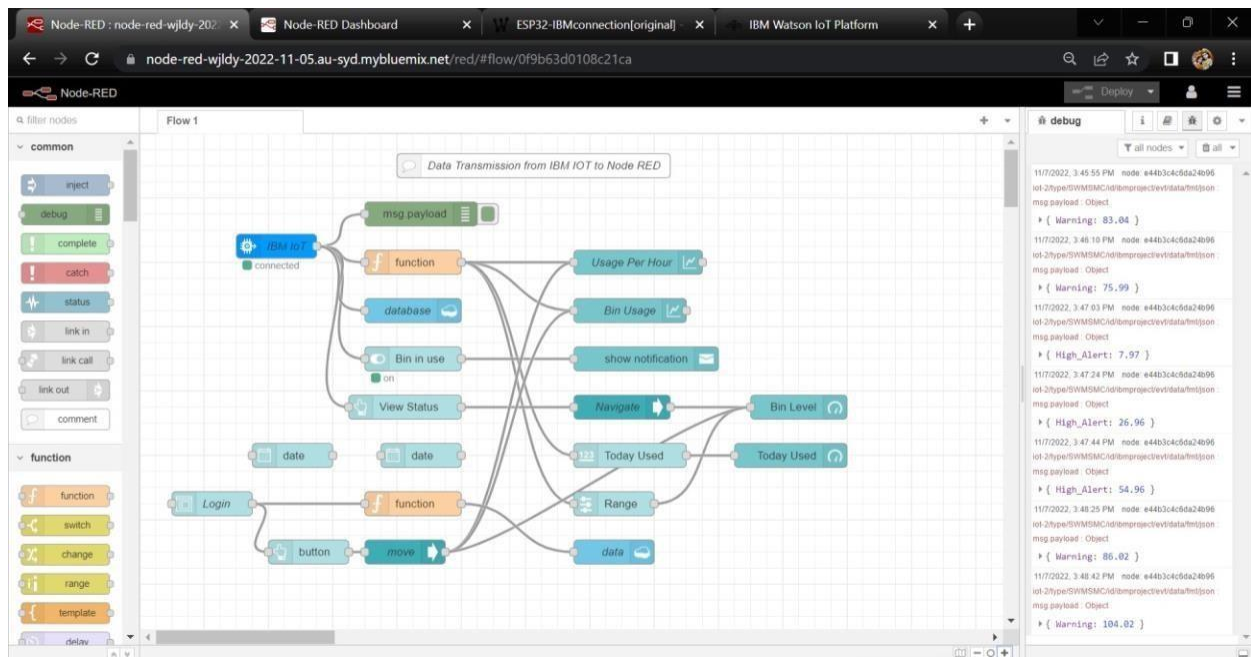
```

3.Data transfer to Watson IOT platform.

The screenshot displays the IBM Watson IoT Platform dashboard. The 'Browse' tab is selected, showing a list of recent events for a specific device. The events are as follows:

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.

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

Databases

Database name Create Database

Your Databases

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	<input data-bbox="1219 1136 1252 1157" type="button" value="🔍"/> <input data-bbox="1260 1136 1292 1157" type="button" value="🔒"/> <input data-bbox="1300 1136 1333 1157" type="button" value="🗑️"/>
noderedwjldy20221105	37.4 KB	4	No	<input data-bbox="1219 1178 1252 1199" type="button" value="🔍"/> <input data-bbox="1260 1178 1292 1199" type="button" value="🔒"/> <input data-bbox="1300 1178 1333 1199" type="button" value="🗑️"/>
sample	59.4 KB	351	No	<input data-bbox="1219 1220 1252 1241" type="button" value="🔍"/> <input data-bbox="1260 1220 1292 1241" type="button" value="🔒"/> <input data-bbox="1300 1220 1333 1241" type="button" value="🗑️"/>
sensor_data	15.7 KB	90	No	<input data-bbox="1219 1262 1252 1283" type="button" value="🔍"/> <input data-bbox="1260 1262 1292 1283" type="button" value="🔒"/> <input data-bbox="1300 1262 1333 1283" type="button" value="🗑️"/>

Showing 1-4 of 4 databases. Databases per page 1

id	key	value
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{"rev": "1-cde2dd17c519394df..."}
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{"rev": "1-d26c5b40891e13c6c..."}
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{"rev": "1-cde2dd17c519394df..."}
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{"rev": "1-f96eb0460bc16cfab0..."}
1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{"rev": "1-7226f08794cd47b7c..."}
1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{"rev": "1-1bbdd9a985bd56cf9..."}
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{"rev": "1-7226f08794cd47b7c..."}
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{"rev": "1-3ad288ecad57f039e..."}
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{"rev": "1-1bbdd9a985bd56cf9..."}
298ed6f6f9b3b815f5ac7c061e...	298ed6f6f9b3b815f5ac7c061e...	{"rev": "1-4e7240f6e5307a1b9..."}

6.Data is stored in JSON format

```

1 {
2   "_id": "0198213c192cb2c244cc2433f1802b91",
3   "_rev": "1-cde2dd17c519394df774738c495f8b",
4   "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/fmt/json",
5   "payload": {
6     "Warning!!": "244.971left"
7   },
8   "deviceId": "ibmproject",
9   "deviceType": "SWMSMC",
10  "eventType": "data",
11  "format": "json"
12 }

```

