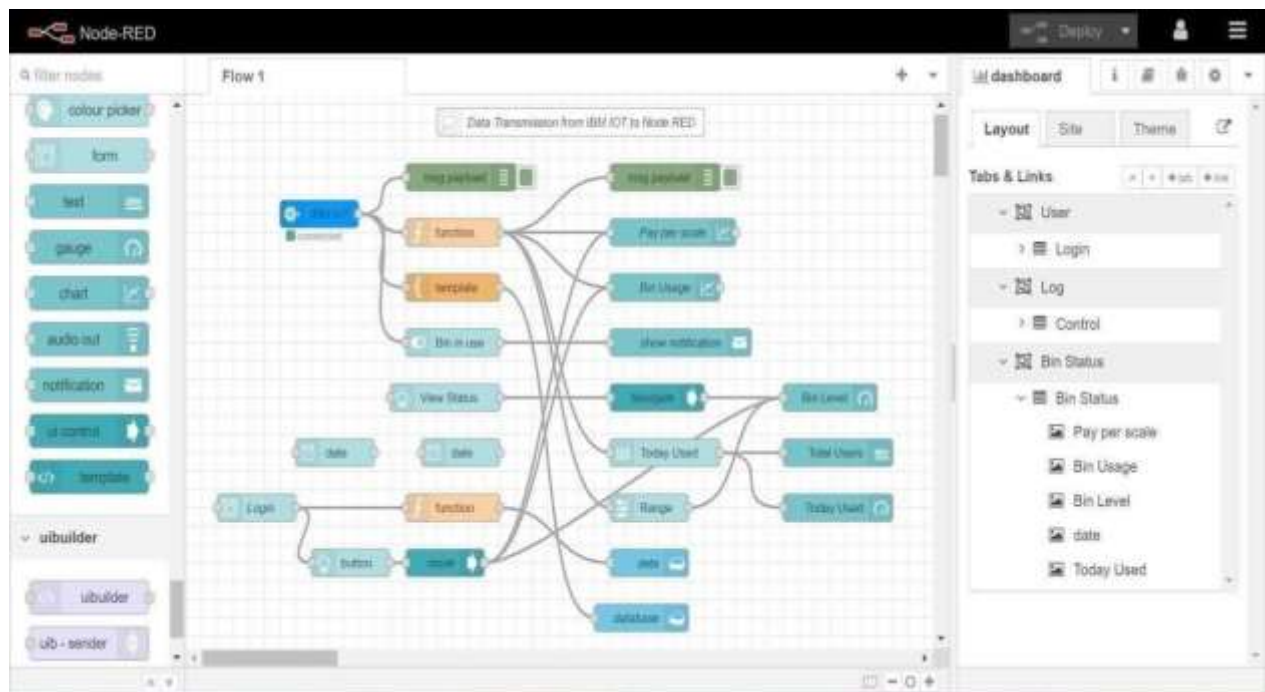
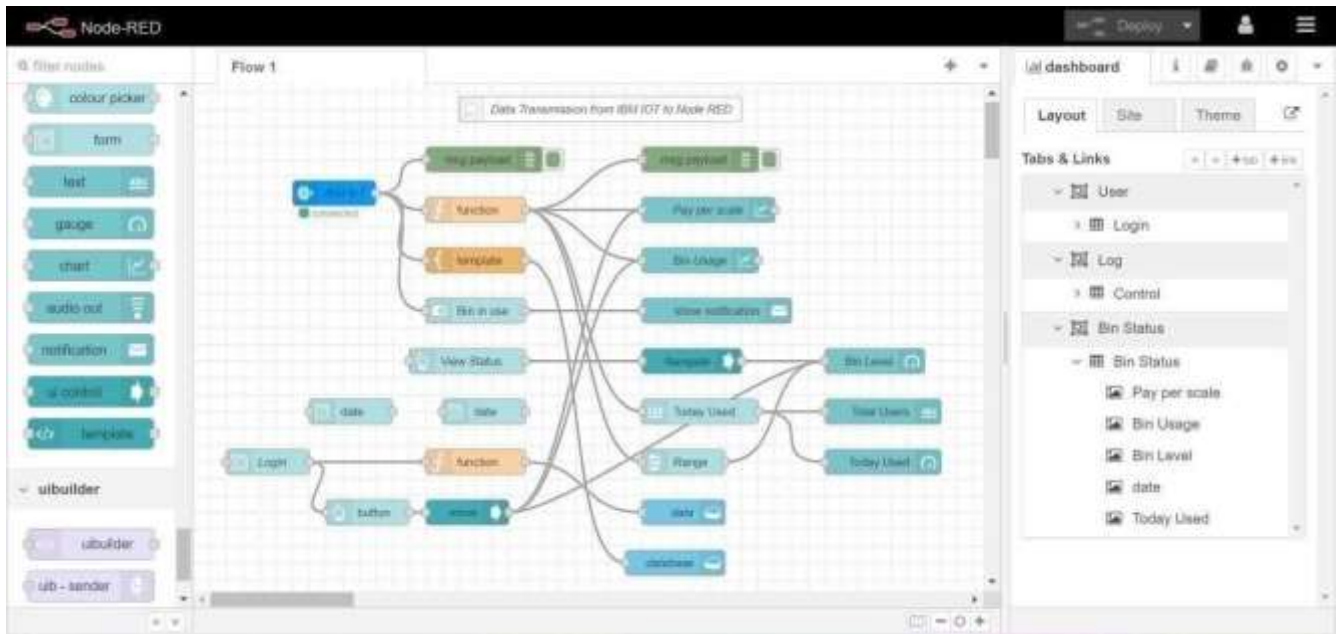


Delivery of Sprint – 4

Date	November 19 2022
Team ID	PNT2022TMID05693
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 WatsonIOT 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(topic, (char*) payload.c_str())) // if
193   {
194     Serial.println("Publish OK");
195   }
196 }
197
198 if(cm <= 30)
199 {
200   digitalWrite(22,HIGH);
201   String payload = "{\"Warning\":\"";
202   payload += cm;
203   payload += "\"}";
204   Serial.print("\n");

```

Simulation

00:35.846 99%

PIR Motion Sensor

Simulate motion

Sending distance: 26.94

Publish OK

Motion Detected

Lid Opened

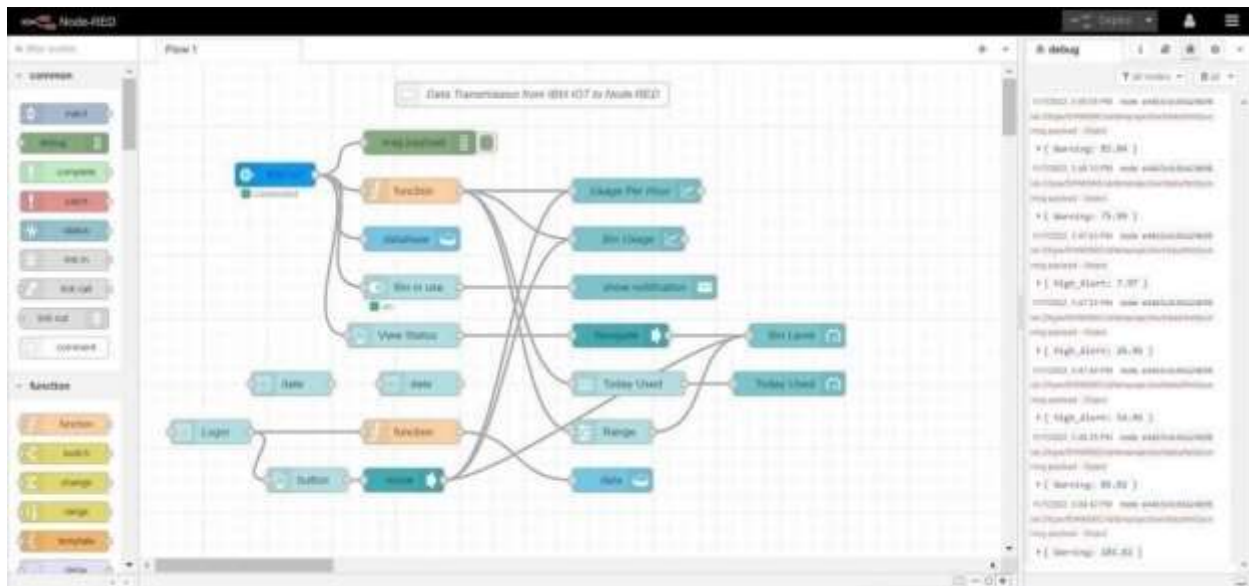
High Alert!!!,Trash bin is about to be full

Lid Closed

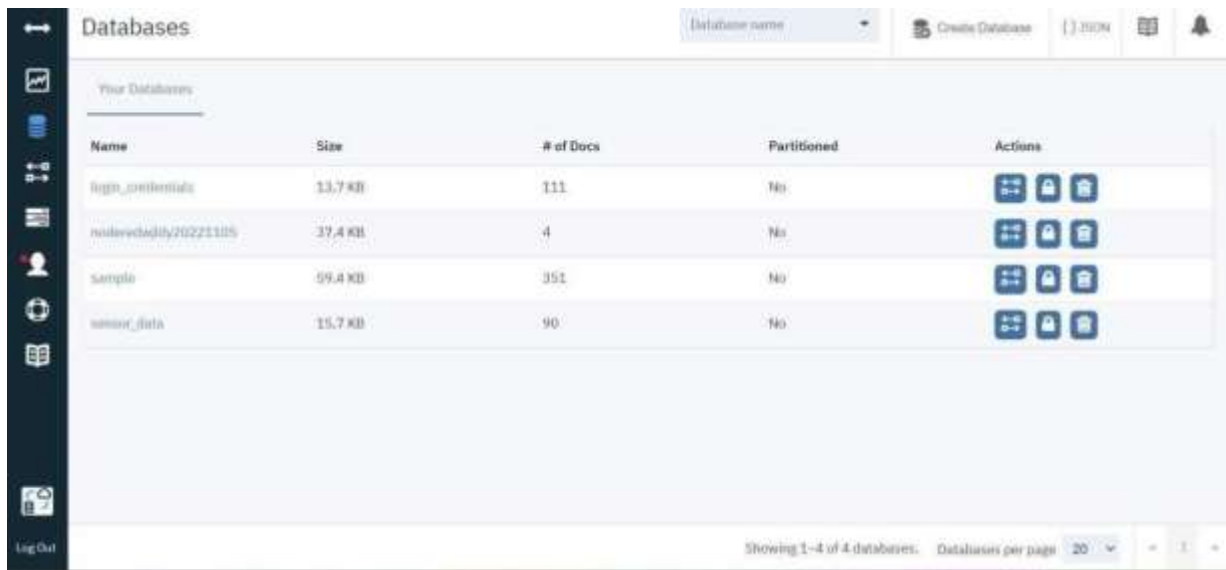
3. Data transfer to Watson IOT platform.

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":20.95}]	json	a few seconds ago
data	[{"Warning":20.95}]	json	a few seconds ago
data	[{"Warning":49.90}]	json	a minute ago
data	[{"Warning":49.90}]	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.

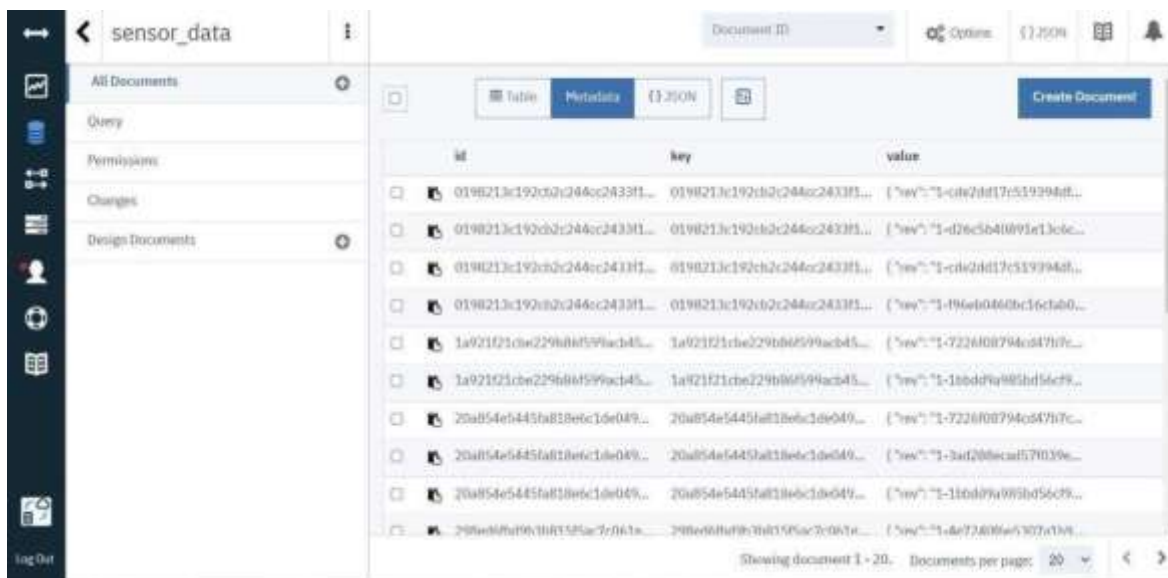


5 . Storing database in IBM cloudant DB.



The screenshot shows the IBM Cloudant Databases interface. At the top, there's a header with 'Databases' and a search bar. Below the header, there's a table titled 'Your Databases' with columns: Name, Size, # of Docs, Partitioned, and Actions. The table lists four databases: 'login_credentials', 'nodevedadity20221125', 'sample', and 'sensor_data'. Each database has three action icons: a plus sign, a lock, and a trash can. At the bottom, there's a pagination bar showing 'Showing 1-4 of 4 databases' and 'Databases per page' set to 20.

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	[+][lock][trash]
nodevedadity20221125	37.4 KB	4	No	[+][lock][trash]
sample	59.4 KB	351	No	[+][lock][trash]
sensor_data	15.7 KB	90	No	[+][lock][trash]



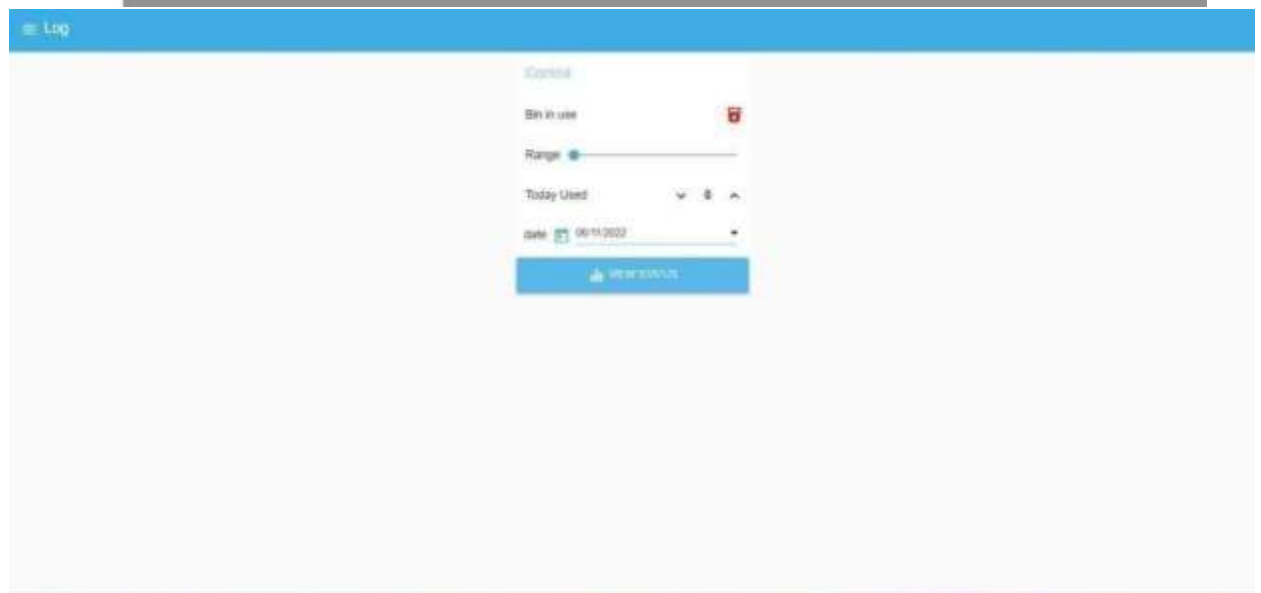
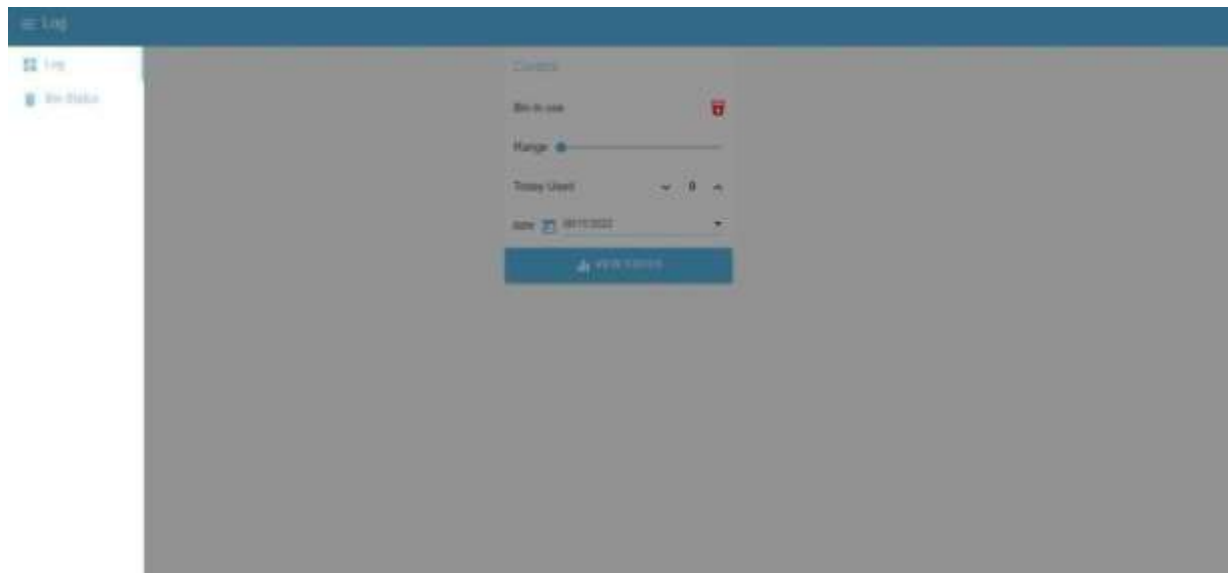
The screenshot shows the IBM Cloudant 'sensor_data' database document view. The left sidebar has a menu with 'All Documents', 'Query', 'Permissions', 'Changes', and 'Design Documents'. The main area displays a table with columns: id, key, and value. The table lists 20 documents, each with a unique ID and a JSON value. At the bottom, there's a pagination bar showing 'Showing document 1 - 20' and 'Documents per page' set to 20.

id	key	value
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394d8...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b40b91e130e...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394d8...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb0460bc16c5b0...
1a921f21che229b8b599ac545...	1a921f21che229b8b599ac545...	{ "rev": "1-722d08794cd47b7c...
1a921f21che229b8b599ac545...	1a921f21che229b8b599ac545...	{ "rev": "1-18bd09a985bd56c79...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-722d08794cd47b7c...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad208ca570339e...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-18bd09a985bd56c79...
298ed88a9b3b835f5ac3c061a...	298ed88a9b3b835f5ac3c061a...	{ "rev": "1-dc72809e5307a1b9...

6. Data is stored in JSON format

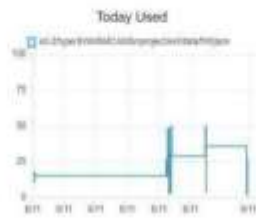
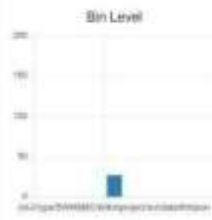


7. Web UI



Bin Status

Bin Status



date 06/11/2022

