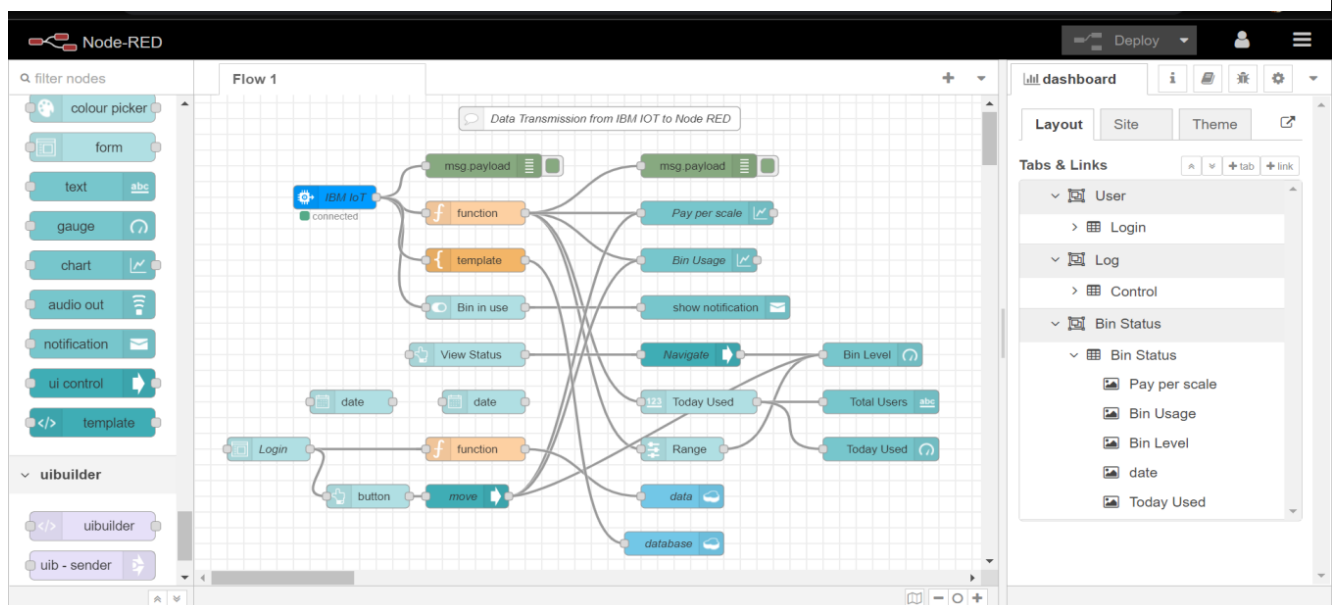
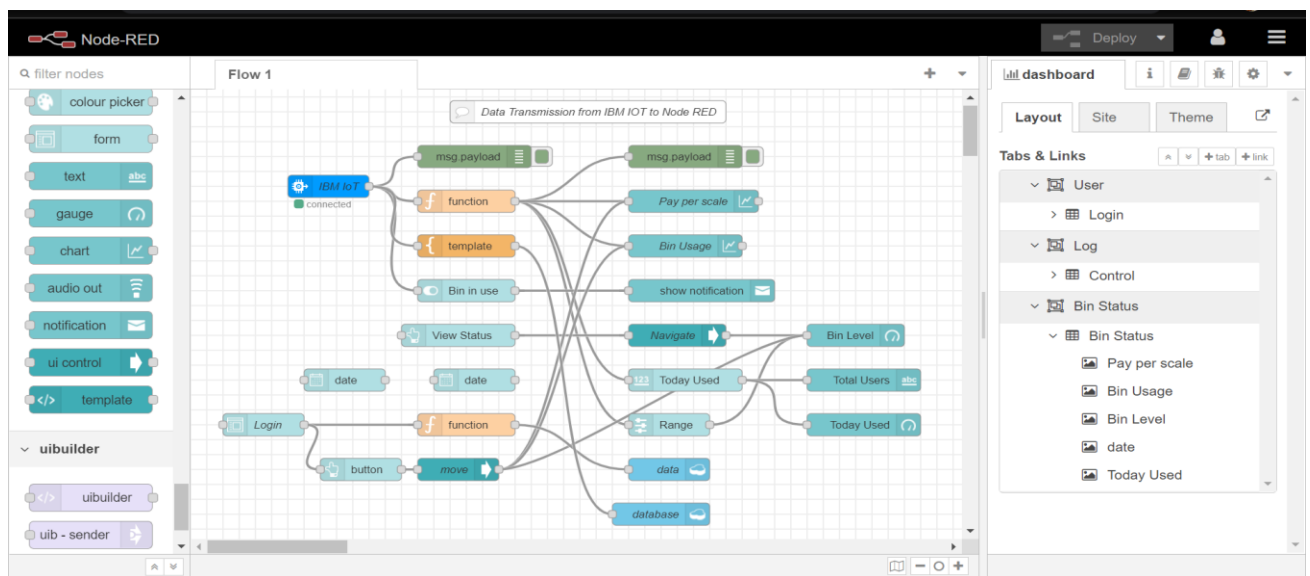


Delivery of Sprint – 3

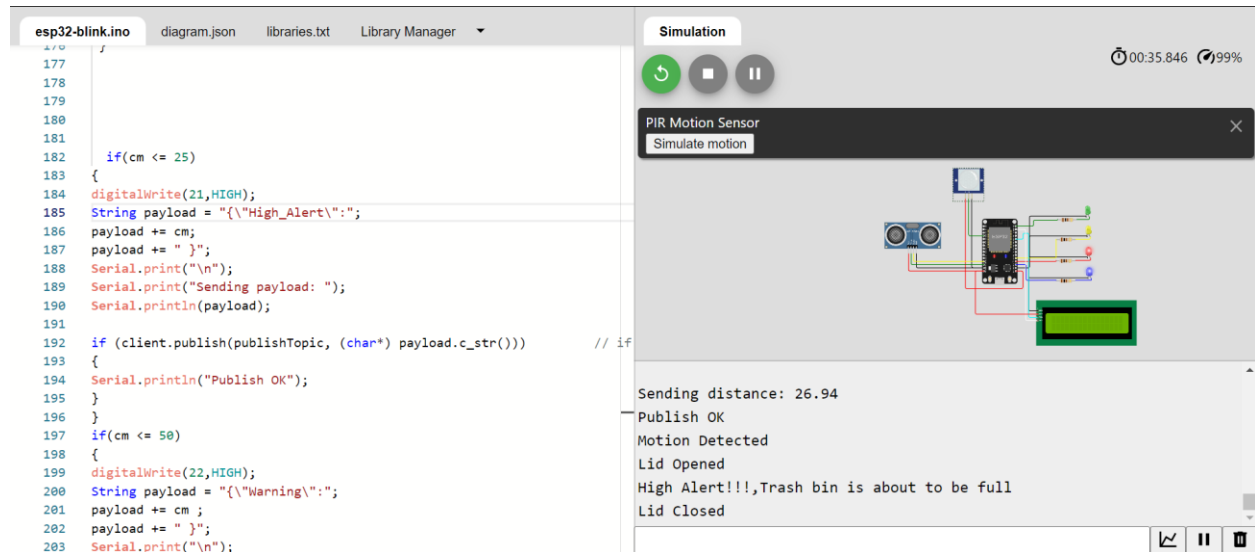
Node Red Connection to IBM Cloudant

Date	5 November 2022
Team ID	PNT20222TMID01026
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.



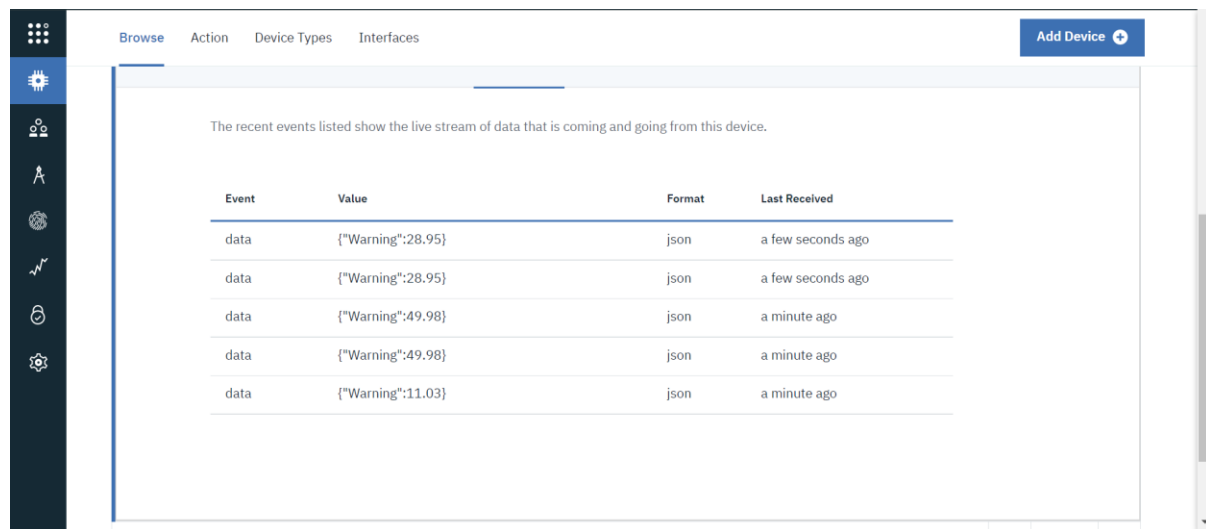
The screenshot shows the Wokwi IDE interface. On the left, the code editor displays a C++ program for an ESP32. The code includes logic for sending data to an IoT platform based on sensor readings. On the right, the 'Simulation' window shows a circuit diagram of an ESP32 connected to various sensors and a display. Below the diagram, a console window displays the output of the simulation, including distance measurements and status messages.

```
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 window output:

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

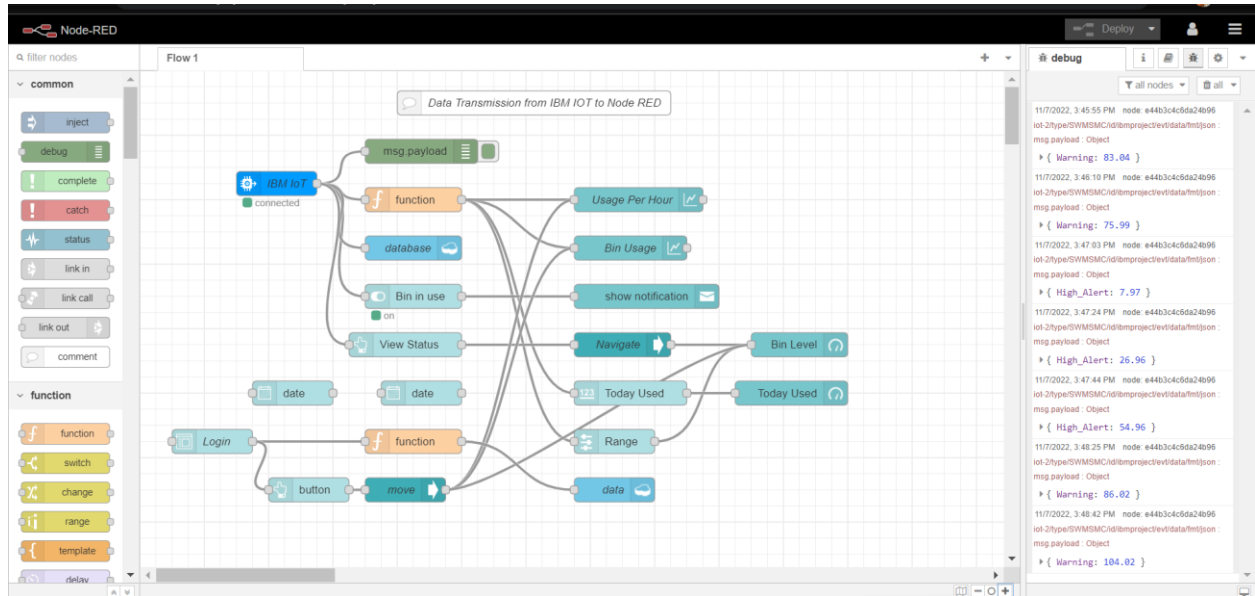
3.Data transfer to Watson IOT platform.



The screenshot shows the IBM Watson IoT Platform dashboard. The 'Browse' tab is selected, displaying a table of recent events. The table has four columns: Event, Value, Format, and Last Received. The events listed are JSON payloads containing warning messages and distance values.

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.

←→

Databases

Database name ▾

Create Database

{ } JSON

Your Databases

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	<div><div></div><div></div><div></div><div></div></div>
noderedwjldy20221105	37.4 KB	4	No	<div><div></div><div></div><div></div><div></div></div>
sample	59.4 KB	351	No	<div><div></div><div></div><div></div><div></div></div>
sensor_data	15.7 KB	90	No	<div><div></div><div></div><div></div><div></div></div>

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

