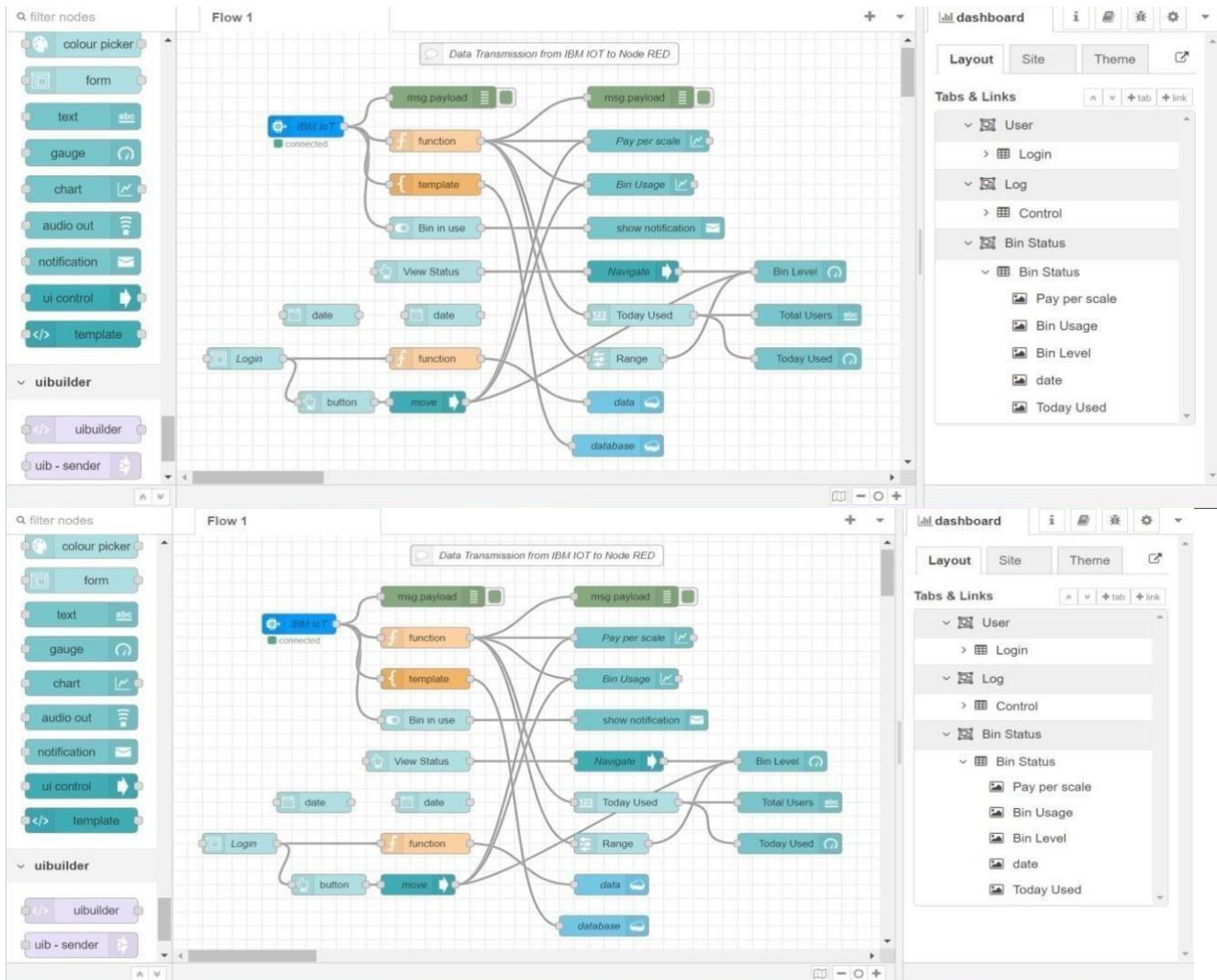


Delivery of Sprint – 3

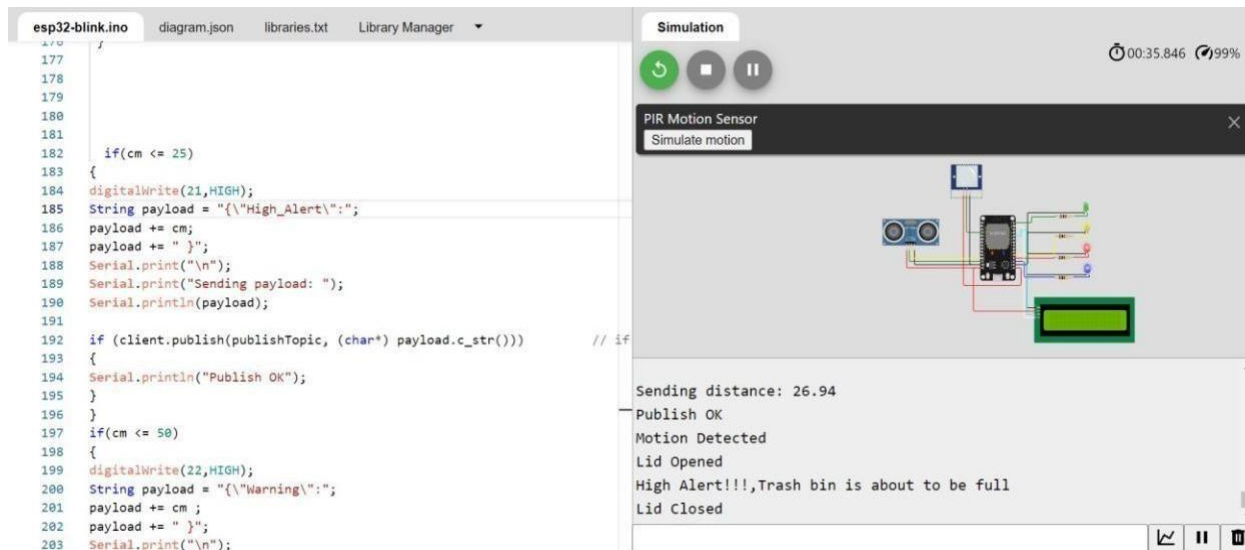
Node Red Connection to IBM Clouant

Date	17 October 2022
Team ID	PNT2022TMID05219
Project Name	Smart Waste Management system for metropolitan cities
Maximum Marks	4 Marks

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



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



The image shows the Wokwi IDE interface. On the left, the 'esp32-blink.ino' file is open, displaying an Arduino sketch. The sketch includes code for a PIR motion sensor and an ultrasonic sensor, with logic to send data to an MQTT broker. On the right, the 'Simulation' window is active, showing a virtual circuit diagram of the hardware. Below the diagram, a console window displays the output of the simulation, including distance measurements and status messages.

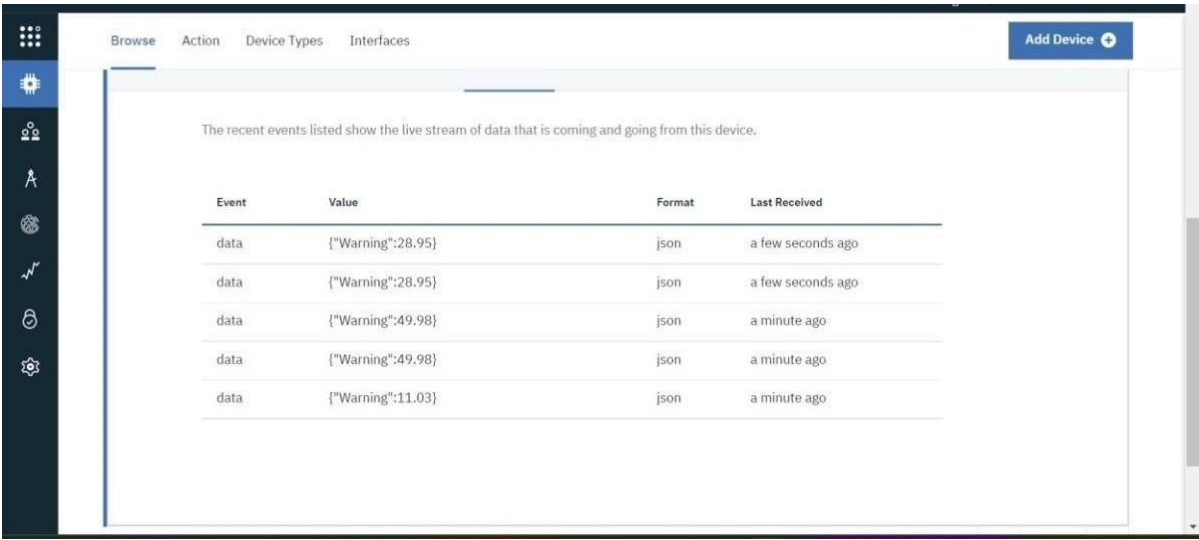
```
177 }
178
179
180
181
182 if(cm <= 25)
183 {
184 digitalWrite(21,HIGH);
185 String payload = "{\"High_Alert\":\"";
186 payload += cm;
187 payload += " }";
188 Serial.print("\n");
189 Serial.print("Sending payload: ");
190 Serial.println(payload);
191
192 if (client.publish(publishTopic, (char*) payload.c_str())) // 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
```

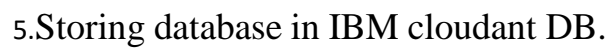
3.Data transfer to Watson IOT platform.

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



The screenshot shows the IBM Watson IoT Platform interface. At the top, there are tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A blue 'Add Device' button is in the top right corner. Below the tabs, a message states: 'The recent events listed show the live stream of data that is coming and going from this device.' Below this message is a table with four columns: 'Event', 'Value', 'Format', and 'Last Received'. The table contains five rows of data, all with 'data' as the event and 'json' as the format. The 'Value' column shows JSON objects with a 'Warning' key and a numerical value. The 'Last Received' column shows the time since the data was received, ranging from 'a few seconds ago' to 'a minute ago'.

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

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

