

## Delivery of Sprint – 3

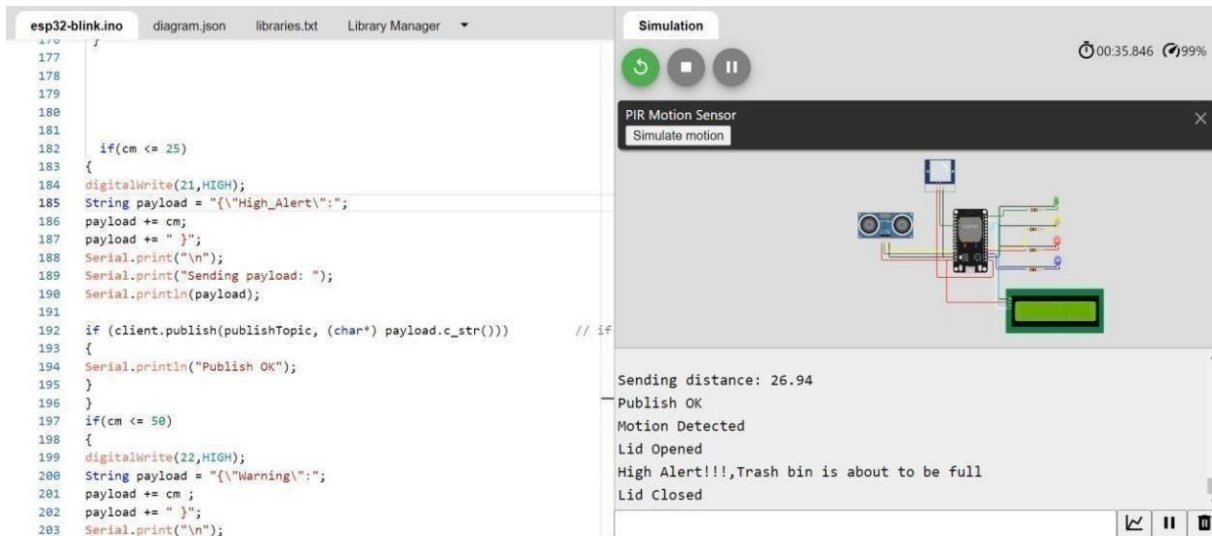
### Node Red Connection to IBMCloudant

Team ID	PNT2022TMID14345
Project Name	Smart WasteManagement 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 screenshot shows the Wokwi IDE interface. On the left, the code editor displays an `esp32-blink.ino` file with the following code:

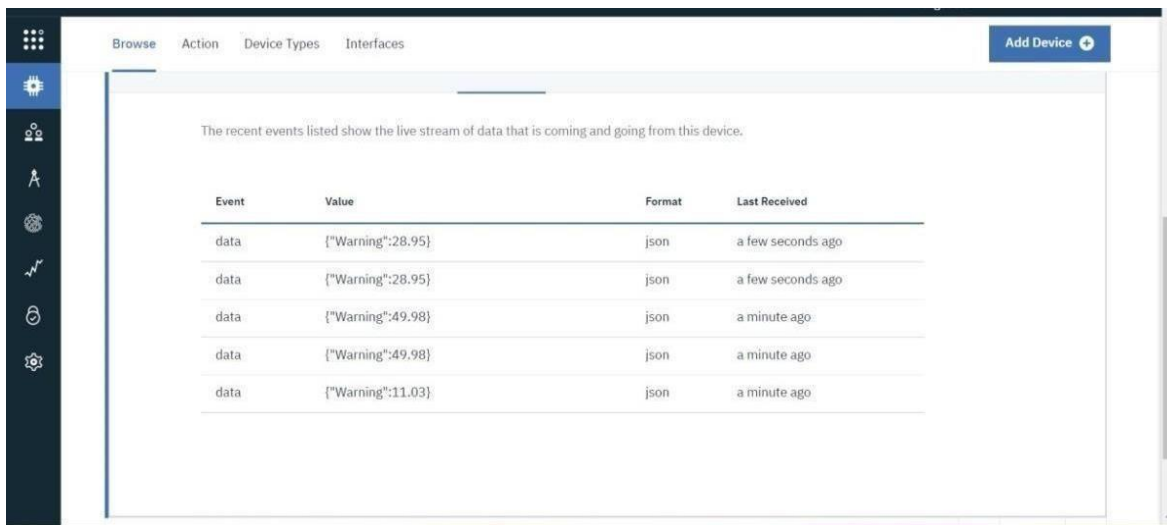
```
177 /
178
179
180
181
182 if(cm <= 25)
183 {
184 digitalWrite(21,HIGH);
185 String payload = "{\"High_Alert\":\"";
186 payload += cm;
187 payload += " }";
188 Serial.print("\n");
189 Serial.print("Sending payload: ");
190 Serial.println(payload);
191
192 if (client.publish(publishTopic, (char*) payload.c_str()))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

On the right, the 'Simulation' window shows a hardware diagram of an ESP32 board connected to a PIR Motion Sensor and a green display. Below the diagram, a log window displays the following output:

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

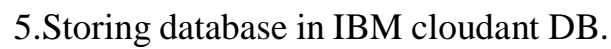
3. Data transfer to Watson IOT platform.

4. Data transfer from IBM Watson IOT platform and Wokwi to Node Red.



The screenshot shows the IBM Watson IoT Platform dashboard. The 'Browse' tab is selected, and the 'Recent events' section displays a table of data. The table has four columns: Event, Value, Format, and Last Received. The data shows a series of 'Warning' events with values ranging from 11.03 to 49.98, all in JSON format, received within the last minute.

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

Log Out

