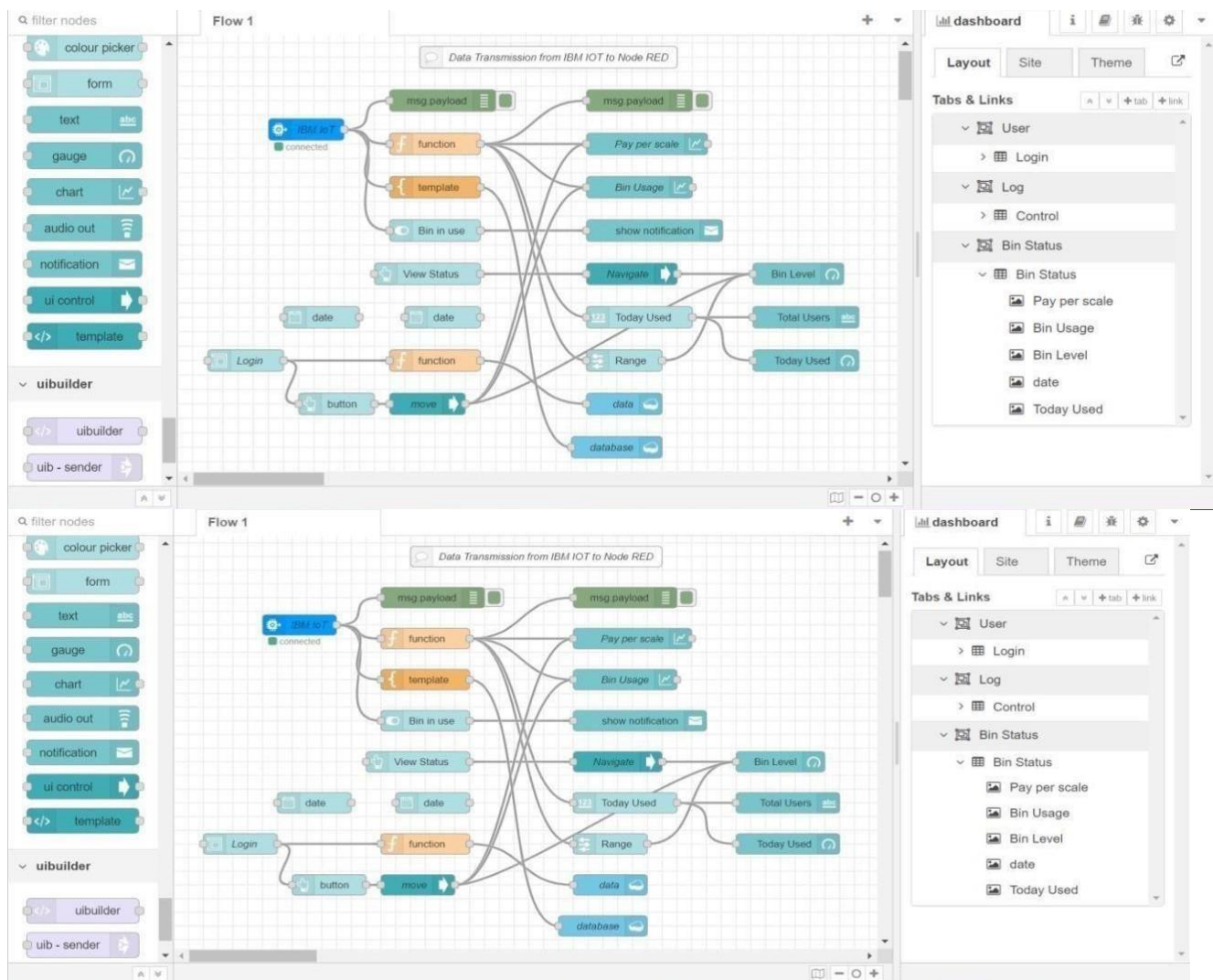


## Delivery of Sprint – 3

### Node Red Connection to IBM Clouddant

Date	17 October 2022
Team ID	PNT2022TMID05381
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.



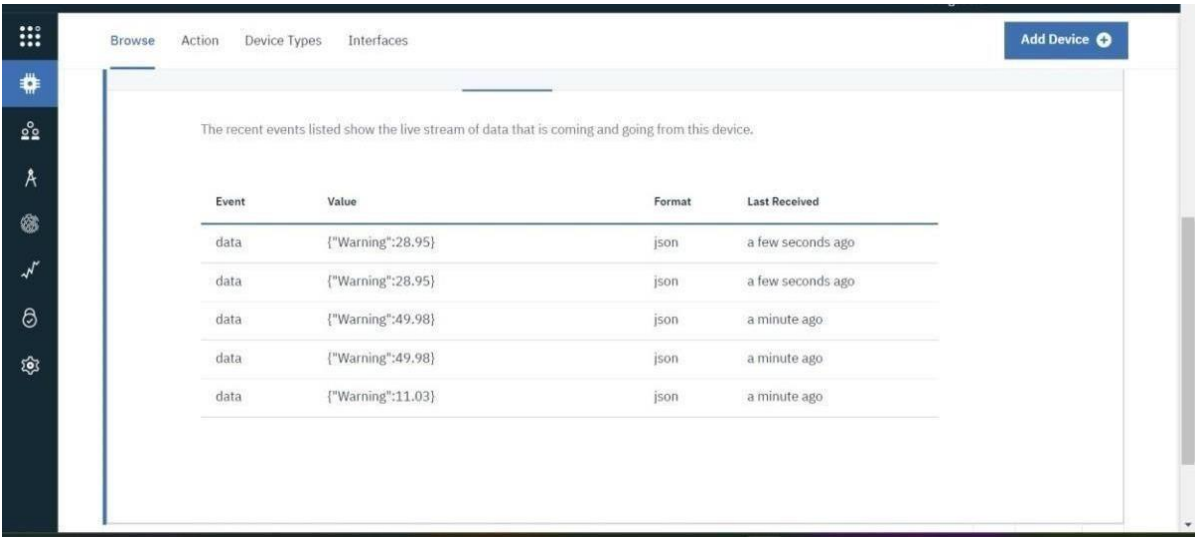
2. Simulate Wokwi connection to transmit data from wokwi account to IBM Watson IOT platform and then to Node Red dashboard.

The image shows the Wokwi IDE interface. On the left, the 'esp32-blink.ino' file is open, displaying an Arduino sketch. The sketch includes logic for a PIR motion sensor and an ultrasonic sensor, sending data to a serial monitor and publishing it to an MQTT topic. On the right, the 'Simulation' window shows a 3D model of the hardware: an ESP32 microcontroller, a PIR motion sensor, an ultrasonic sensor, and an LCD display. A 'PIR Motion Sensor' control panel is visible, with a 'Simulate motion' button. Below the simulation, a serial monitor 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
```

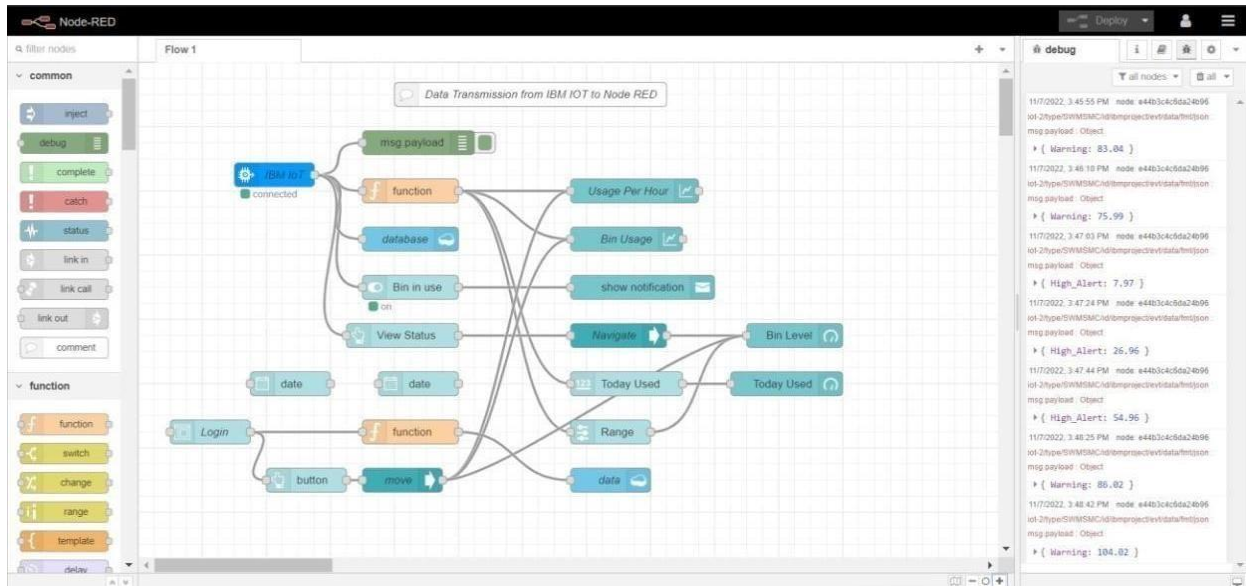
3.Data transfer to Watson IOT platform.

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















The screenshot displays the IBM Watson IoT Platform interface. At the top, there are tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A blue sidebar on the left contains various icons. In the top right corner, there is a blue button labeled 'Add Device' with a plus icon. The main content area features a heading 'The recent events listed show the live stream of data that is coming and going from this device.' Below this heading is a table with four columns: 'Event', 'Value', 'Format', and 'Last Received'. The table contains five rows of data, all with the event type 'data' and a JSON value containing a 'Warning' field with a numerical value. The 'Format' column for all rows is 'json', and the 'Last Received' column shows timestamps like 'a few seconds ago' and '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



## 5. Storing database in IBM cloudant DB.

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	  
noderedwjd20221105	37.4 KB	4	No	  
sample	59.4 KB	351	No	  
sensor_data	15.7 KB	90	No	  

sensor\_data

Document ID

Options {} JSON

All Documents

Query

Permissions

Changes

Design Documents

Create Document

	id	key	value
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df...
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b40891e13c6c...
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df...
<input type="checkbox"/>	0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb0460bc16cfab0...
<input type="checkbox"/>	1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-7226f08794cd47b7c...
<input type="checkbox"/>	1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-1bbdd9a985bd56cf9...
<input type="checkbox"/>	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f08794cd47b7c...
<input type="checkbox"/>	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ecad57f039e...
<input type="checkbox"/>	20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bbdd9a985bd56cf9...
<input type="checkbox"/>	298ed6fhd9b3b815f5ac7c061e...	298ed6fhd9b3b815f5ac7c061e...	{ "rev": "1-4e72d0f6e5307a1h9...

Showing document 1 - 20. Documents per page: 20

6.Data is stored in JSON format

sensor\_data > 0198213c192cb2c244cc2433f1802b91

{} JSON

Save Changes Cancel

Upload Attachment Clone Document Delete

```

1 {
2   "_id": "0198213c192cb2c244cc2433f1802b91",
3   "_rev": "1-cde2dd17c519394df774730c495f8b",
4   "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/format/json",
5   "payload": {
6     "Warning!!": "244.97left"
7   },
8   "deviceId": "ibmproject",
9   "deviceType": "SWMSMC",
10  "eventType": "data",
11  "format": "json"
12 }

```

Log Out