

Project Development Phase Sprint II

Date	19 th November 2022
Team ID	PNT2022TMID277860
Project Name	Signs with Smart Connectivity for better road safety

SPRINT TARGETS:

Sprint	Functional Requirement (Epic)	UserStory Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Aviod accidents And speed control	USN-1	Using smart digital signs and control speed limit	20	Medium	RAJESH NAWAS SAMUEL MANI BALAJI

Wokwi Simulation: <https://wokwi.com/projects/348855035785904723>

The image shows a Wokwi simulation of an ESP32 microcontroller connected to a DHT22 temperature and humidity sensor. The code on the left is as follows:

```
1  /**
2   * ESP32 + DHT22 Example for Wokwi
3   *
4   * https://wokwi.com/arduino/projects/322410731508073042
5   */
6
7  #include "DHTesp.h"
8
9  const int DHT_PIN = 15;
10
11  DHTesp dhtSensor;
12
13  void setup() {
14    Serial.begin(115200);
15    dhtSensor.setup(DHT_PIN, DHTesp::DHT22);
16  }
17
18  void loop() {
19    TempAndHumidity data = dhtSensor.getTempAndHumidity();
20    Serial.println("Temp: " + String(data.temperature, 2) + "°C");
21    Serial.println("Humidity: " + String(data.humidity, 1) + "%");
22    Serial.println("----");
23    delay(1000);
24  }
```

The simulation on the right shows the physical components and a terminal window displaying the output:

```
Temp: 24.00°C
Humidity: 40.0%
----
Temp: 24.00°C
Humidity: 40.0%
----
Temp: 24.00°C
```

IoT Device – IoT Platform

Device ID **Status** **Device Type** **Class ID** **Date Added** **Descriptive Location**

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
0001	Disconnected	edge-device-1	Device	Nov 5, 2022 8:56 PM	

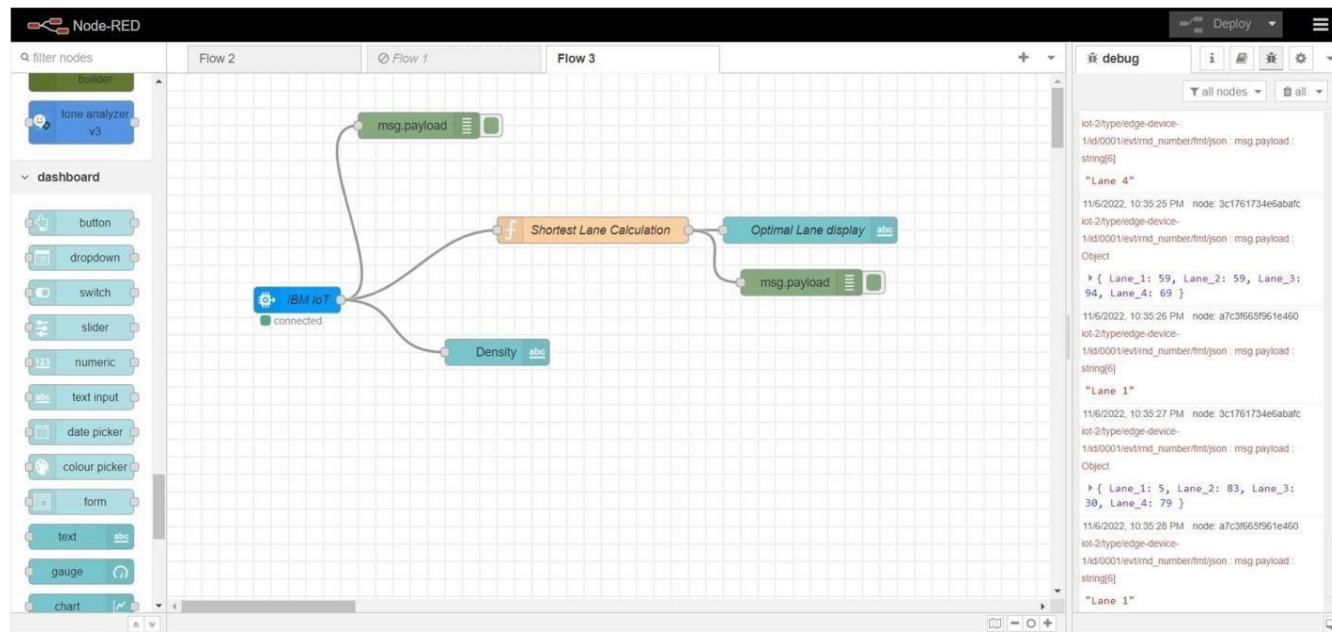
Identity **Device Information** **Recent Events** **State** **Logs**

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
rnd_number	{"Lane_1":5,"Lane_2":83,"Lane_3":30,"Lane_4":...	json	a few seconds ago
rnd_number	{"Lane_1":59,"Lane_2":59,"Lane_3":94,"Lane_4":...	json	a few seconds ago
rnd_number	{"Lane_1":93,"Lane_2":88,"Lane_3":49,"Lane_4":...	json	a few seconds ago
rnd_number	{"Lane_1":2,"Lane_2":61,"Lane_3":21,"Lane_4":...	json	a few seconds ago
rnd_number	{"Lane_1":70,"Lane_2":11,"Lane_3":69,"Lane_4":...	json	a few seconds ago

1 Simulation running

Node Red



Edit function node

Delete

Cancel

Done

⚙ Properties



🔖 Name

Shortest Lane Calculation



⚙ Setup

On Start

On Message

On Stop

```
1 var l1 = msg.payload.Lane_1;
2 var l2 = msg.payload.Lane_2;
3 var l3 = msg.payload.Lane_3;
4 var l4 = msg.payload.Lane_4;
5
6 mini = Math.min(l1,l2,l3,l4);
7
8 res = "-";
9
10 switch(mini) {
11     case l1: res = "Lane 1"; break;
12     case l2: res = "Lane 2"; break;
13     case l3: res = "Lane 3"; break;
14     case l4: res = "Lane 4"; break;
15 }
16
17 msg.payload = res;
18
19 return msg;
```

Node Red Web UI

