

Project Development Phase

Sprint – II

Team id	PNT2022TMID52137
Project name	Signs with smart connectivity for better road safety

Sprint targets:

Sprint	Functional requirements	USN	User story/Task	Story points	Priority	Team members
Sprint-2	Safe Ride	USN-4	As a passanger, I should have a Safe journey	20	Medium	Ravichandran.T Pooja.E Robinson.S Rooba.P

Wowki Simulation:

WOKWI

SAVE SHARE final_iot

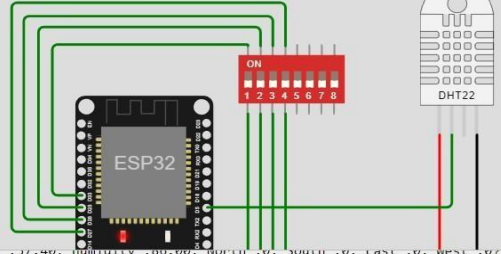
Docs S

sketch.ino diagram.json libraries.txt Library Manager

```
1 #include <WiFi.h> //library for wifi
2 #include <PubSubClient.h> //library for MQTT
3 #include "DHT.h" // Library for dht11
4 #define DHTPIN 5 // what pin we're connected to
5 #define DHTTYPE DHT22 // define type of sensor DHT 11
6
7 DHT dht (DHTPIN, DHTTYPE); // creating the instance by passing pin and type of
8
9 void callback(char* topic, byte* payload, unsigned int payloadLength)
10
11 //-----credentials of IBM Accounts-----
12
13 #define ORG "twidnq" //IBM ORGANIZATION ID
14 #define DEVICE_TYPE "Sample_one" //Device type mentioned in ibm watson IOT Platform
15 #define DEVICE_ID "4854" //Device ID mentioned in ibm watson IOT Platform
16 #define TOKEN "12345678" //Token
17 String data3;
18 float h, t;
19
20 //----- Customise the above values -----
21
22 char server[] = ORG ".messaging.internetofthings.ibmcloud.com"; // Server Name
23 char publishTopic[] = "iot-2/evt/Data/fmt/json"; // topic name and type of event
24 char subscribetopic[] = "iot-2/cmd/command/fmt/String"; // cmd REPRESENT command
25 char authMethod[] = "use-token-auth"; // authentication method
26 char token[] = TOKEN;
27 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID; //client id
28
29 //-----
30
```

Simulation

02:15.539 81%



temp:37.40, humidity:86.00, North:0, South:0, East:0, West:0

Publish ok

temp:37.40

humidity:86.00

Sending payload:

{"temp":37.40,"humidity":86.00,"North":0,"South":0,"East":0,"West":0}

Publish ok

temp:37.40

IoT Device in IoT Platform:

Device ID

Status

Device Type

Class ID

Date Added

4054

Disconnected

Sample_one

Device

Nov 7, 2022 10:15 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

event_1

{"temperature":40,"humidity":38}

json

a few seconds ago

event_1

{"temperature":21,"humidity":72}

json

a few seconds ago

event_1

{"temperature":28,"humidity":74}

json

a few seconds ago

event_1

{"temperature":15,"humidity":32}

json

a few seconds ago

event_1

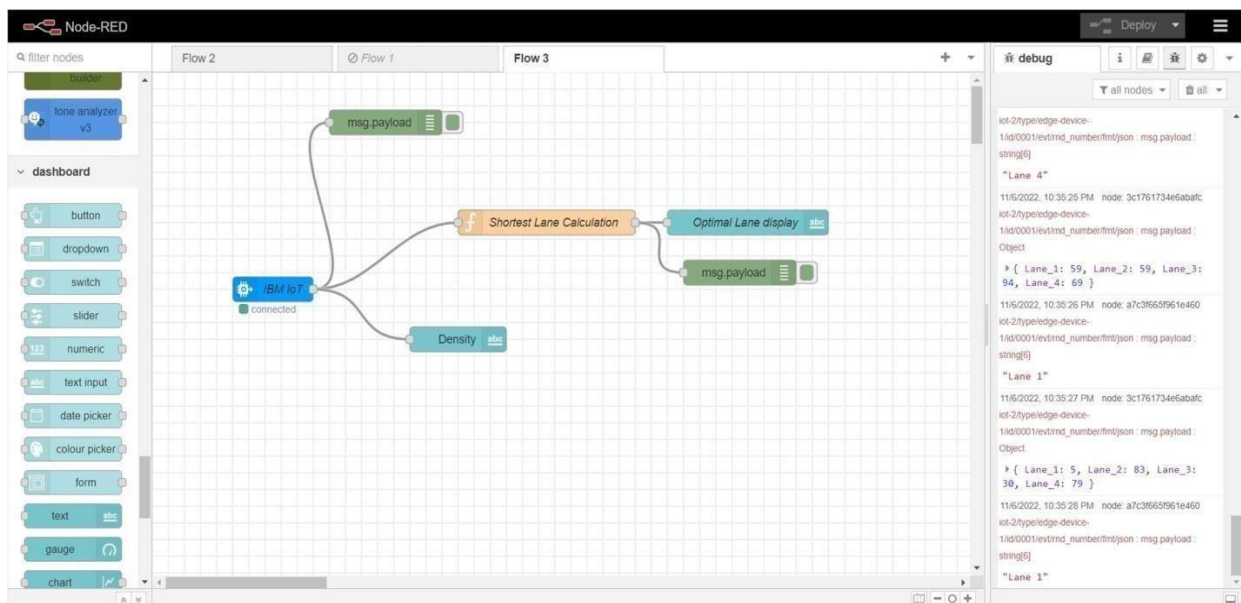
{"temperature":47,"humidity":26}

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

Home

Speed Limit

Speed Limit



71.1
mph

Environment Data

Temperature

16.1

Humidity

76.5

High Priority Vehicle Direction

High Priority

Towards North

Lane Density

Optimal Lane

Lane 1

Density

5 | 83 | 30 | 79