Project Development Phase Sprint I

Date	13 November 2022
Team ID	PNT2022TMID38026
Project Name	Signs with Smart Connectivity for better road safety

SPRINT TARGETS:

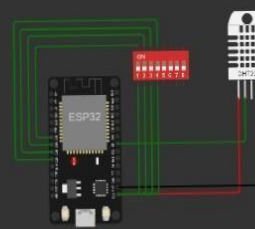| Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Dynamic Speed Limit	USN-1	As a traveller , It is Essential form to know the speed limit	10	High	Lakshmi priya Harshini Hemavathy Swetha
Sprint-1	Priority Vehicle	USN-2	Simulating the circuits and experimenting	2	High	Lakshmi priya Harshini Hemavathy Swetha
Sprint-1	Weather Speed Limit	USN-3	As a user ,I should be aware of weather influence on speed limit for safer ride		Medium	Lakshmi priya Harshini Hemavathy Swetha

Wokwi Simulation: https://wokwi.com/projects/348178332935782994


```
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 typr of dht connect
8
9  void callback(char* subscribetopic, byte* payload, unsigned int payloadLength);
10
11 //-------credentials of IBM Accounts------
12
13 #define ORG "psh4py"//IBM ORGANITION ID
14 #define DEVICE_TYPE "alert-device"//Device type mentioned in ibm watson IOT Platform
15 #define DEVICE_ID "4571"//Device ID mentioned in ibm watson IOT Platform
16 #define TOKEN "12345678"      //Token
17 String data3;
18 float h, t;
19
20
21 //-------- Customise the above values --------
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 perform a
24 char subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd  REPRESENT command type AND
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 //---------------------------------------
31 WiFiClient wifiClient; // creating the instance for wificlient
32 PubSubClient client(server, 1883, callback ,wifiClient); //calling the predefined client
33
```

temp:37.40

humidity:86.00

Sending payload:

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

Publish ok

Reconnecting client to psh4py.messaging.internetofthings.ibmcloud.com

....

IoT Device – IoT Platform

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
Data	{"temp":23.4,"humidity":63,"North":1,"South":0,...	json	a few seconds ago
Data	{"temp":23.4,"humidity":63,"North":1,"South":0,...	json	a few seconds ago
Data	{"temp":23.4,"humidity":63,"North":1,"South":0,...	json	a few seconds ago

Node Red
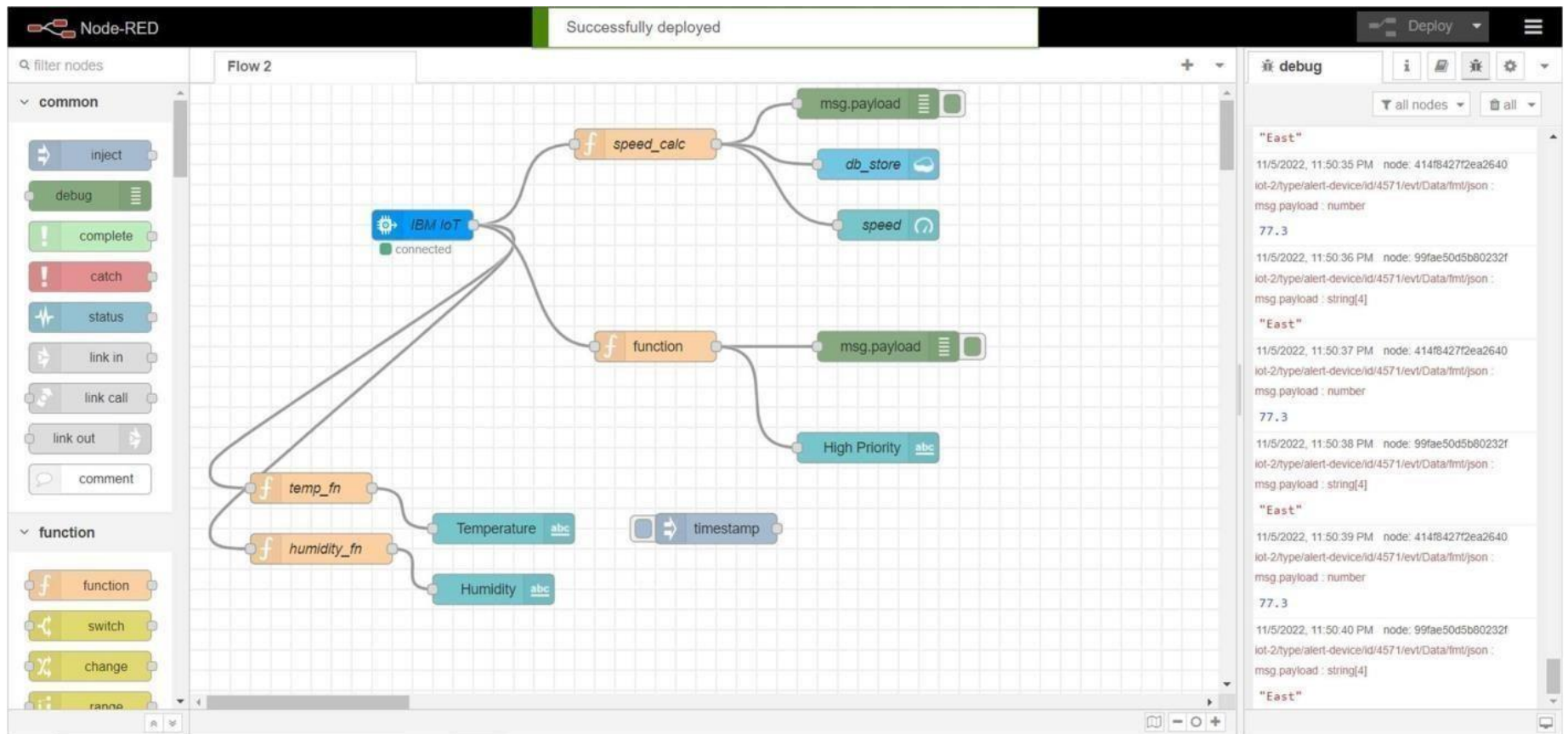
Node Red Web UI

Home

Speed Limit

Speed Limit

69.7

kmph

0   100

Environment Data

Temperature
14.7

Humidity
88

High Priority Vehicle Direction

High Priority
Towards East

---

sketch.ino | Simulation

diagram.json
-
libraries.txt

Library
Manager
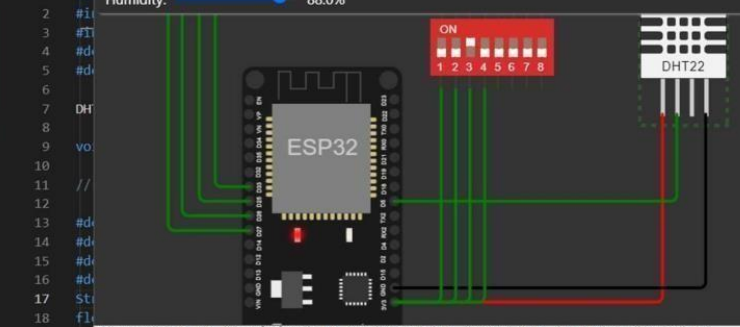
⏱ 01:32.632   ⏲ 96%

Editing DHT22   ✕
Temperature: ▭▬▭ 14.7℃
Humidity: ▬▭ 88.0%

ON
1 2 3 4 5 6 7 8

DHT22

ESP32

```
1   #i
2   #i
3   #I
4   #d
5   #d
6
7   DH
8
9   vo
10
11  //
12
13  #d
14  #d
15  #d
16  #d
17  St
18  fl
19
20
21  //
22  ch
23  ch
24  ch
25  ch
26  ch
27  ch
28
```

{"temp":14.70,"humidity":88.00,"North":0,"South":0,"East":1,"West":0}
Publish ok
temp:14.70
humidity:88.00
Sending payload:
{"temp":14.70,"humidity":88.00,"North":0,"South":0,"East":1,"West":0}
Publish ok

Home

Speed Limit

Speed Limit

70.5

0   kmph   100

Environment Data

Temperature
15.5

Humidity
91.5

High Priority Vehicle Direction

High Priority
Towards South

{"temp":15.50,"humidity":91.50,"North":0,"South":1,"East":0,"West":0}
Publish ok
temp:15.50
humidity:91.50
Sending payload:
{"temp":15.50,"humidity":91.50,"North":0,"South":1,"East":0,"West":0}
Publish ok
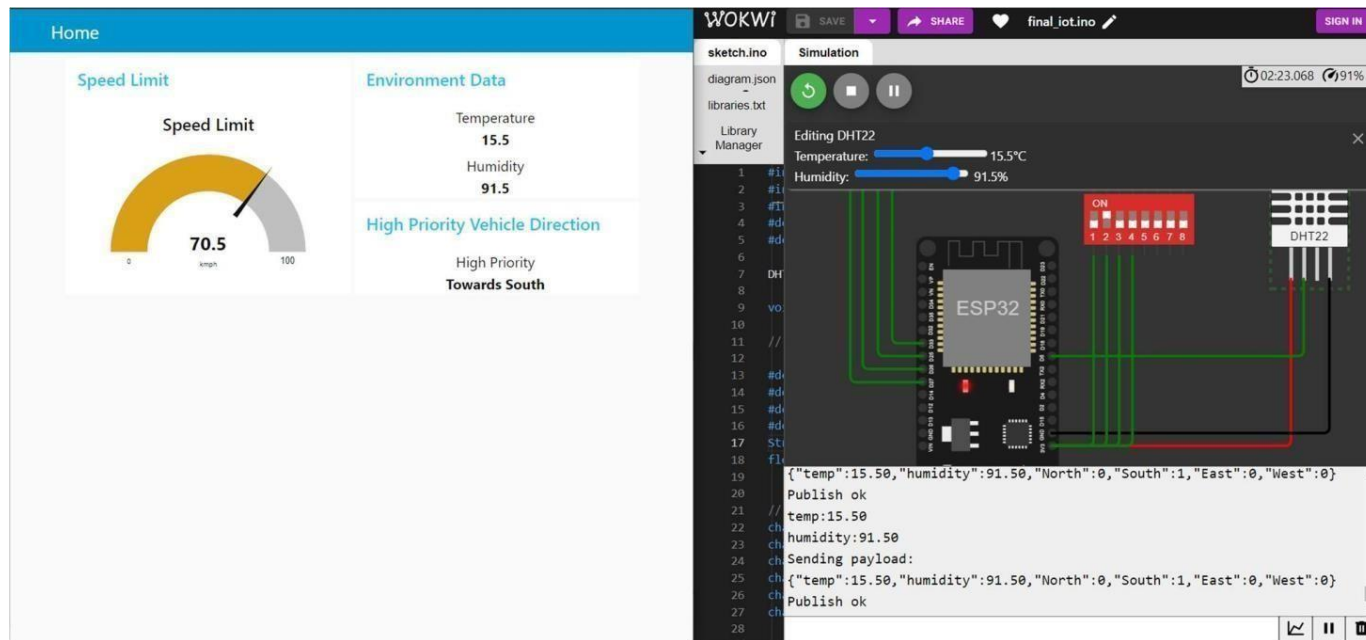
Cloudant Database

All Documents

Query

Permissions

Changes

Design Documents

Table | Metadata | { } JSON

Document ID

Options | { } JSON

Create Document

_id	payload
060cc88d44faf11288e9cdfd7d8de45a	35
060cc88d44faf11288e9cdfd7d904e58	60
060cc88d44faf11288e9cdfd7d90c3f9	45.5
060cc88d44faf11288e9cdfd7d92a313	60
2314e7571ab5925365e082f191bb2c9c	52.5
26939bb99e5c84bed4f6a20342a22ab2	35
26939bb99e5c84bed4f6a20342a7ccd5	44
3ffa1240575d0cd0d7f848833802e389	55
48a3afbcf5f840466e09ed279d3c3451	53
48a3afbcf5f840466e09ed279d3c5b7c	53
48a3afbcf5f840466e09ed279d3c9545	53
52730057f2d5fde2d21dfaaaabc10dc8	55

Showing 2 of 3 columns. ☐ Show all columns.

Showing document 1 - 20. Documents per page: 20

Log Out