Project Development PhaseSprint I

Date	13 November 2022
Team ID	PNT2022TMID17377
Project Name	Signs with Smart Connectivity for better road safety

SPRINT TARGETS:

Sprint	Functional Requirement (Epic)	UserStory Number	UserStory / 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	Sudir Sunilkumar Sanjaykumar Venkatesh
Sprint-1	Priority Vehicle	USN-2	Simulatingthecircuitsandexperimenting	2	High	Sudir Sunilkumar Sanjaykumar Venkatesh
Sprint-1	Weather SpeedLimit	USN-3	As auser,I should be aware of weather influence on speedlimit for safer ride		Medium	Sudir Sunilkumar Sanjaykumar Venkatesh

```
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
34
```
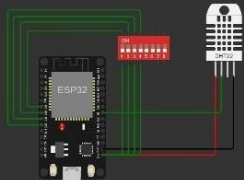
⏱ 01:47.514 ⚡98%

```
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

4571	Connected	alert-device	Device

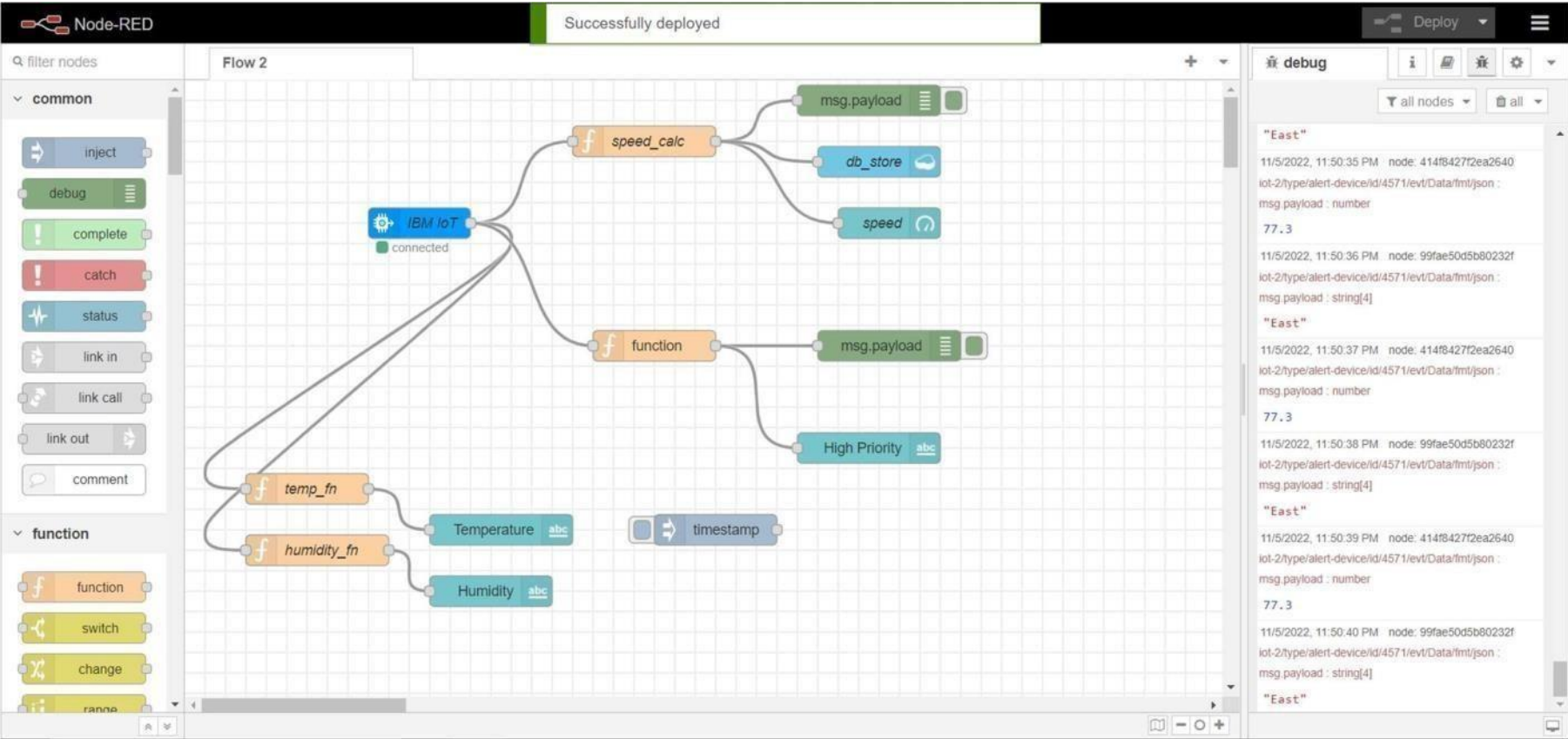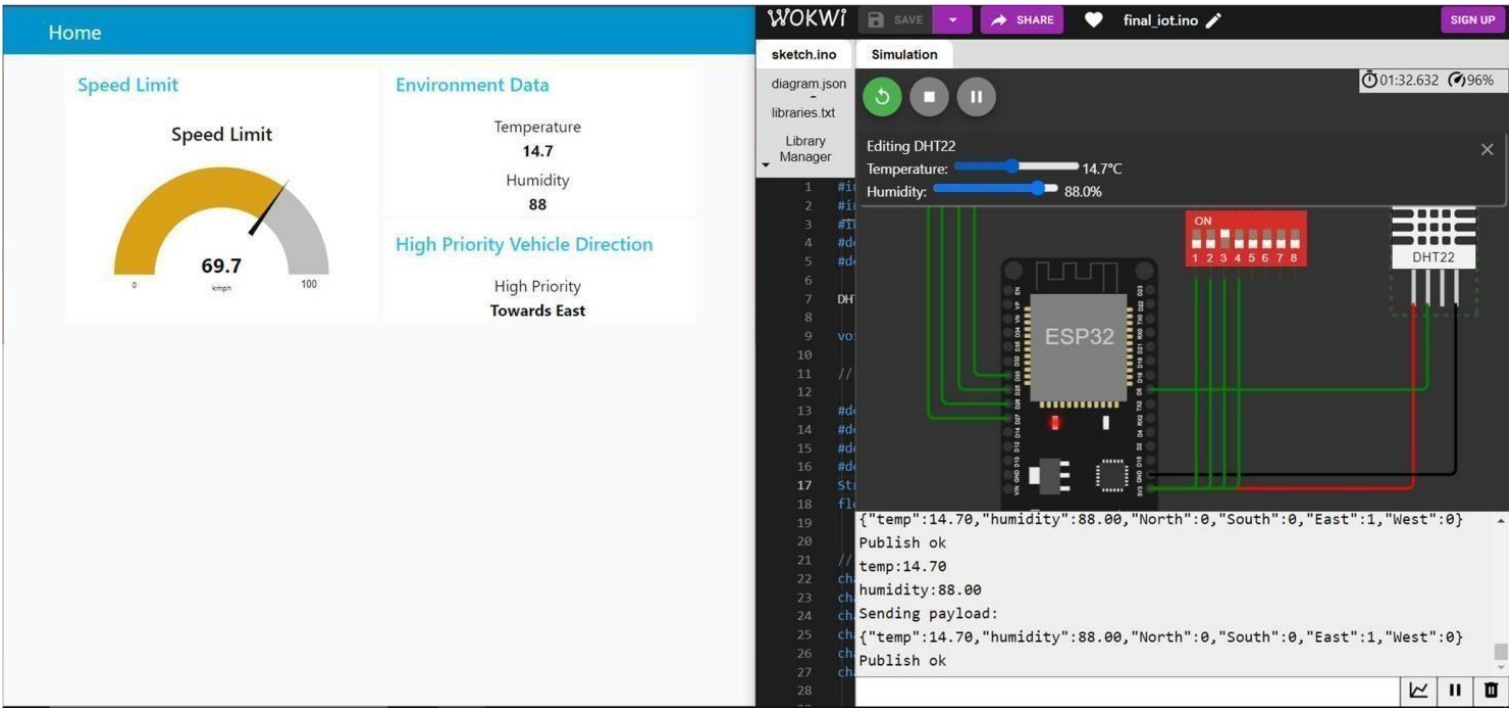| Identity	Device Information	Recent Events	State	Logs

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

0   kmph   100

70.5

Environment Data

Temperature
15.5

Humidity
91.5

High Priority Vehicle Direction

High Priority
Towards South

WOKWI   SAVE   SHARE   final_iot.ino   SIGN IN

sketch.ino   Simulation

diagram.json
-
libraries.txt

Library
Manager

02:23.068   91%

Editing DHT22   ✕
Temperature: 15.5°C
Humidity: 91.5%

ON
1 2 3 4 5 6 7 8

DHT22

ESP32

```
1  #i
2  #i
3  #T
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":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