

Project Development Phase Sprint I

Date	13 November 2022
Team ID	PNT2022TMID42985
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	Arul Sunder Vasanth Praveen Akshay
Sprint-1	Priority Vehicle	USN-2	Simulating the circuits and experimenting	2	High	Arul Sunder Vasanth Praveen Akshay
Sprint-1	Weather Speed Limit	USN-3	As a user, I should be aware of weather influence on speed limit for a safe ride		Medium	Arul Sunder Vasanth Praveen Akshay

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

Wokwi Simulation Interface showing the sketch and simulation results.

Sketch (sketch.ino):

```
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 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
```

Simulation:

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
.....

01:47.514 98%

IoT Device – IoT Platform

▼

4571

Connected

alert-device

Device

Identity

Device Information

Recent Events

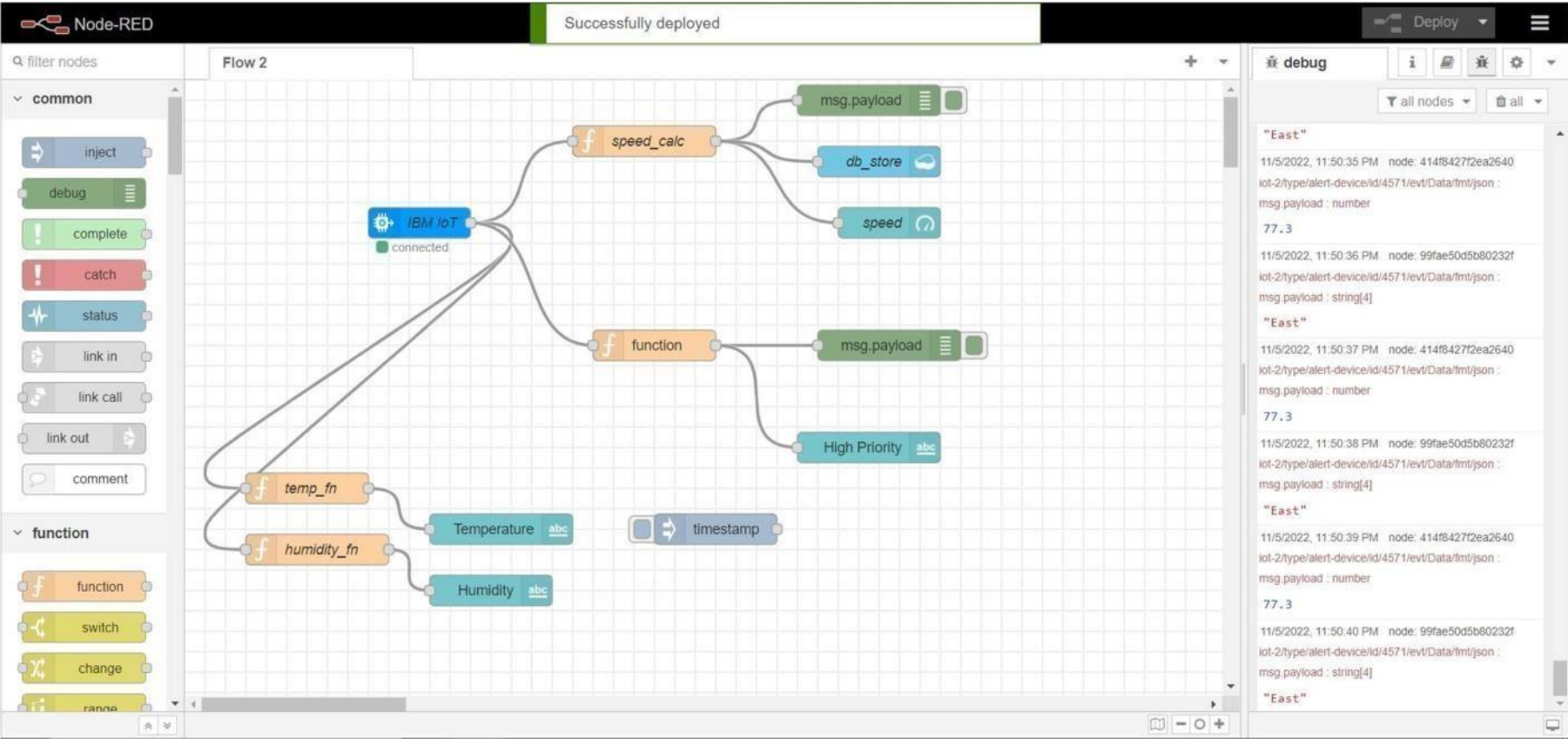
State

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

