

# Project Development

## Phase Sprint – 3

Team id	PNT2022TMID48891
Project name	Signs with smart connectivity for better road safety

WOKWI

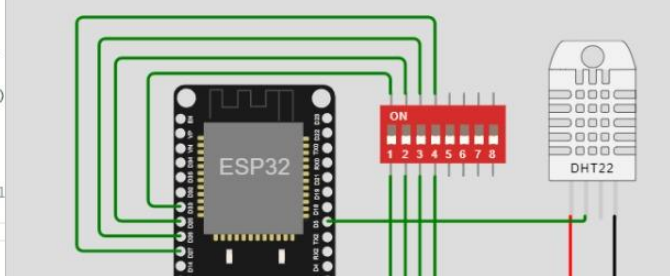
SAVE SHARE

Docs

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* subscribetopic, byte* payload, unsigned int payloadLength)
10
11 //-----credentials of IBM Accounts-----
12
13 #define ORG "7yf9hac" //IBM ORGANIZATION ID
14 #define DEVICE_TYPE "umamaheswari" //Device type mentioned in ibm watson IOT Platform
15 #define DEVICE_ID "uma27" //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
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
```

Simulation



{"temp":24.00,"humidity":40.00,"North":0,"South":0,"East":0,"West":0}

Publish ok

temp:24.00

humidity:40.00

Sending payload:

{"temp":24.00,"humidity":40.00,"North":0,"South":0,"East":0,"West":0}

Publish ok

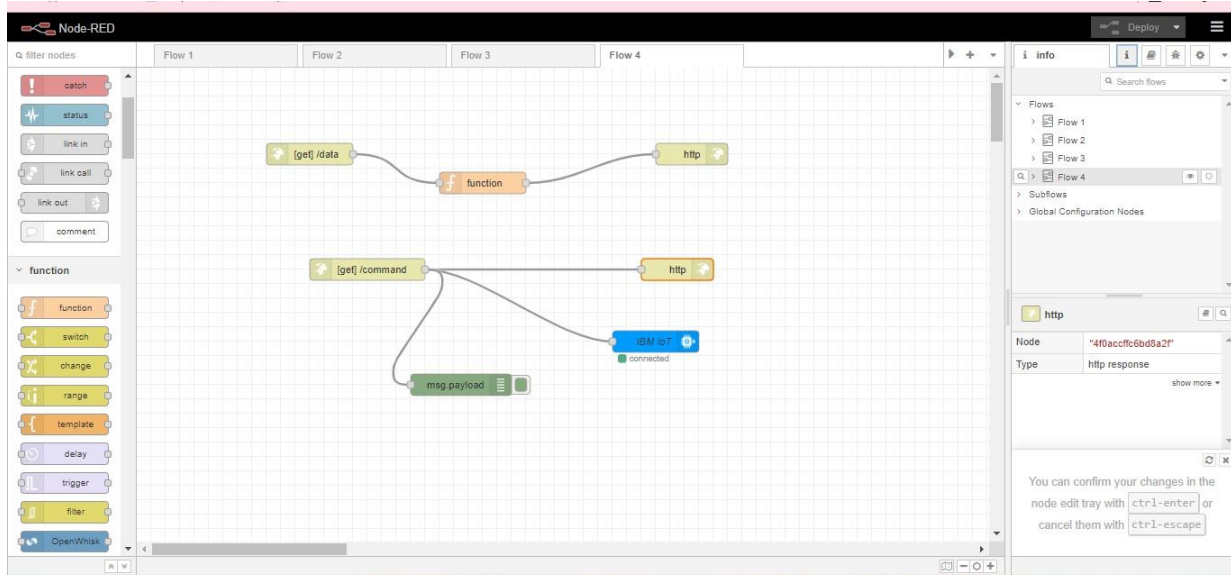
25°C Haze 10:18 AM 11/19/2022

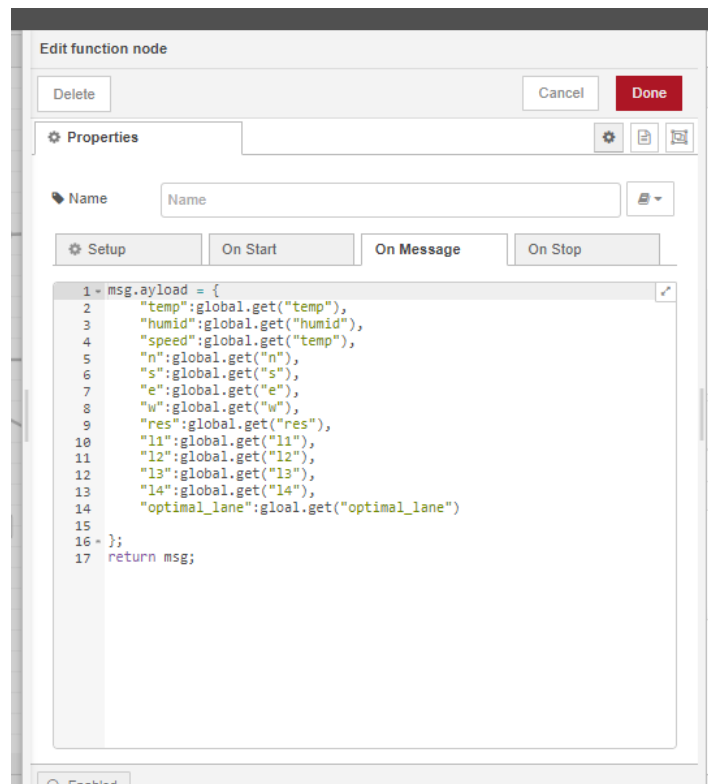
## IOT-DEVICE :

Event	Value	Format	Last Received
Data	{"temp":37.4,"humidity":86,"North":0,"South":0...	json	a few seconds ago
Data	{"temp":37.4,"humidity":86,"North":0,"South":0...	json	a few seconds ago
Data	{"temp":37.4,"humidity":86,"North":0,"South":0...	json	a few seconds ago
Data	{"temp":37.4,"humidity":86,"North":0,"South":0...	json	a few seconds ago
Data	{"temp":37.4,"humidity":86,"North":0,"South":0...	json	a few seconds ago

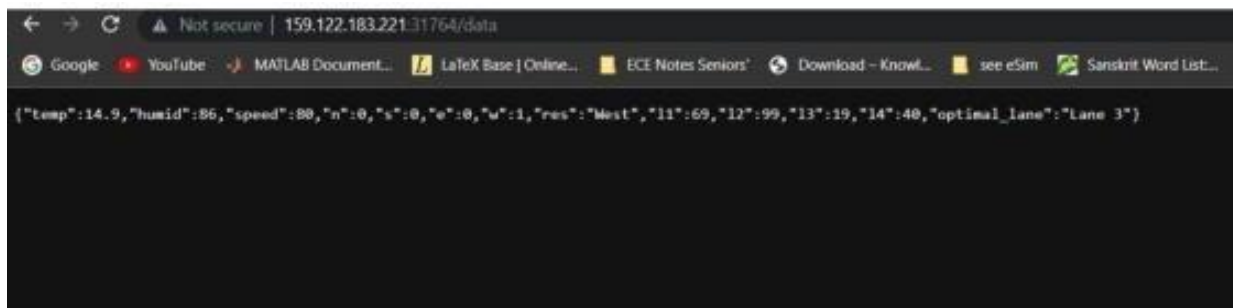
0 Simulations running

## NODE-RED CONNECT WITH MIT APP INVENTOR:





## OUTPUT:



## MIT APP INVENTOR UI DESIGN:



```
when Click1.Timer
do
  set Web1.Uri to "http://59.122.13.224:81764/data"
  call Web1.Get
```

```
when Web1.GetTest
  uri responseCode responseType responseContent
do
  set temp_data.Text to
    look up in pairs key temp
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
  set humd_data.Text to
    look up in pairs key humd
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
  set speed_data.Text to
    look up in pairs key speed
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
  set direction_data.Text to
    look up in pairs key dir
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
  set opt_lane_data.Text to
    look up in pairs key opt_lane
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
  set lane_data.Text to
    join
    look up in pairs key E1
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
    E2
    look up in pairs key E2
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
    E3
    look up in pairs key E3
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
    E4
    look up in pairs key E4
    pairs call Web1.JsonTextDecode
    jsonText get responseContent
    notFound
```

## OUTPUT DISPLAY FROM MIT APP:

