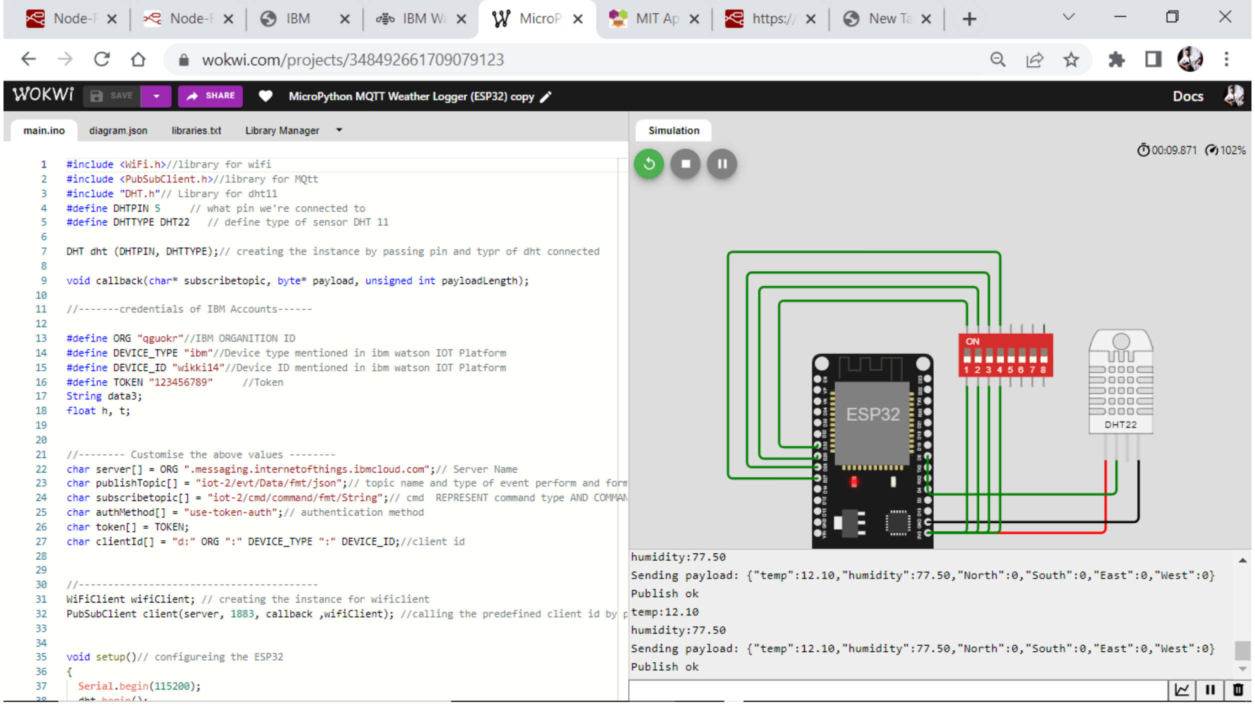
PROJECT DEVELOPMENT PHASE SPRINT-3

DATE	**10-11-2022**
TEAM ID	**PNT2022TMID36746**
PROJECT NAME	**SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY**

Work SIMULATION:

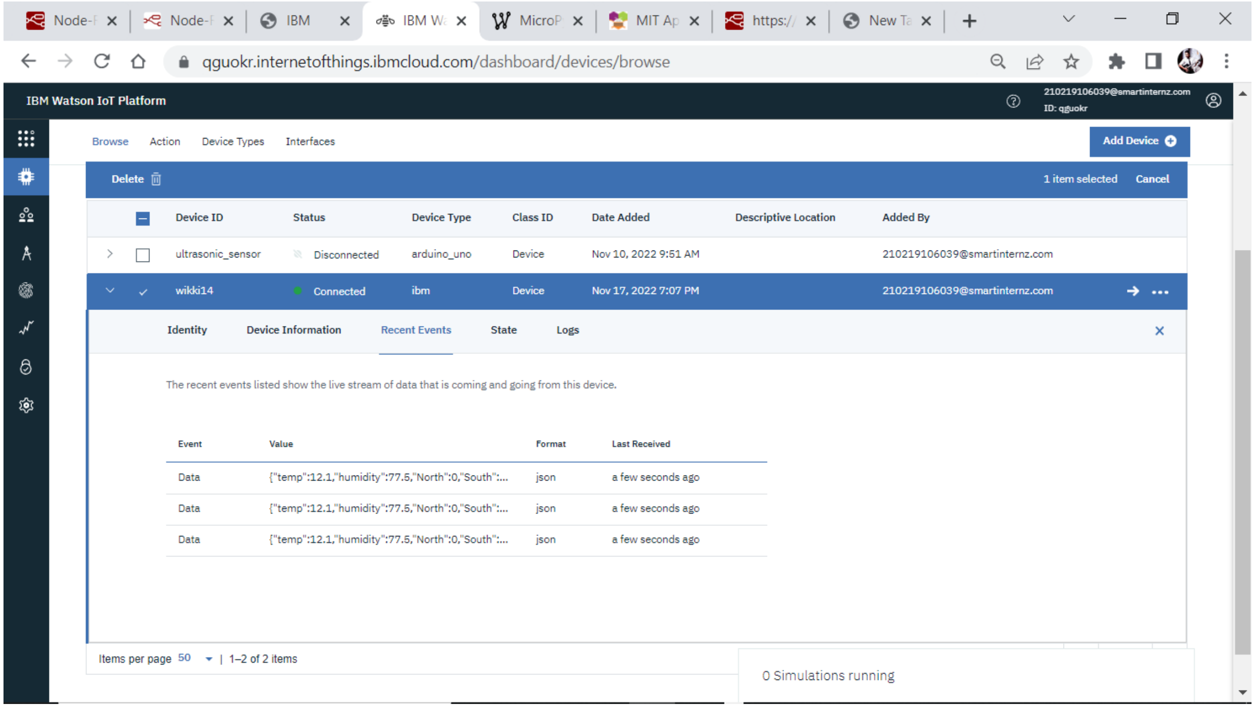
REF:https://wokwi.com/projects/348492661709079123



```
#include <WiFi.h>//library for wifi
#include <PubSubClient.h>//library for MQtt
#include "DHT.h"// Library for dht11
#define DHTPIN 5     // what pin we're connected to
#define DHTTYPE DHT22   // define type of sensor DHT 11

DHT dht (DHTPIN, DHTTYPE);// creating the instance by passing pin and typr of dht connected

void callback(char* subscribetopic, byte* payload, unsigned int payloadLength);

//-------credentials of IBM Accounts------

#define ORG "qguokr"//IBM ORGANITION ID
#define DEVICE_TYPE "ibm"//Device type mentioned in ibm watson IOT Platform
#define DEVICE_ID "wikki14"//Device ID mentioned in ibm watson IOT Platform
#define TOKEN "123456789"     //Token
String data3;
float h, t;


//-------- Customise the above values --------
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of event perform and form
char subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd  REPRESENT command type AND COMMAN
char authMethod[] = "use-token-auth";// authentication method
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id


//-----------------------------------------
WiFiClient wifiClient; // creating the instance for wificlient
PubSubClient client(server, 1883, callback ,wifiClient); //calling the predefined client id by p


void setup()// configureing the ESP32
{
  Serial.begin(115200);
  dht.begin();
```

```
humidity:77.50
Sending payload: {"temp":12.10,"humidity":77.50,"North":0,"South":0,"East":0,"West":0}
Publish ok
temp:12.10
humidity:77.50
Sending payload: {"temp":12.10,"humidity":77.50,"North":0,"South":0,"East":0,"West":0}
Publish ok
```

WATSON IOT OUTPUT:

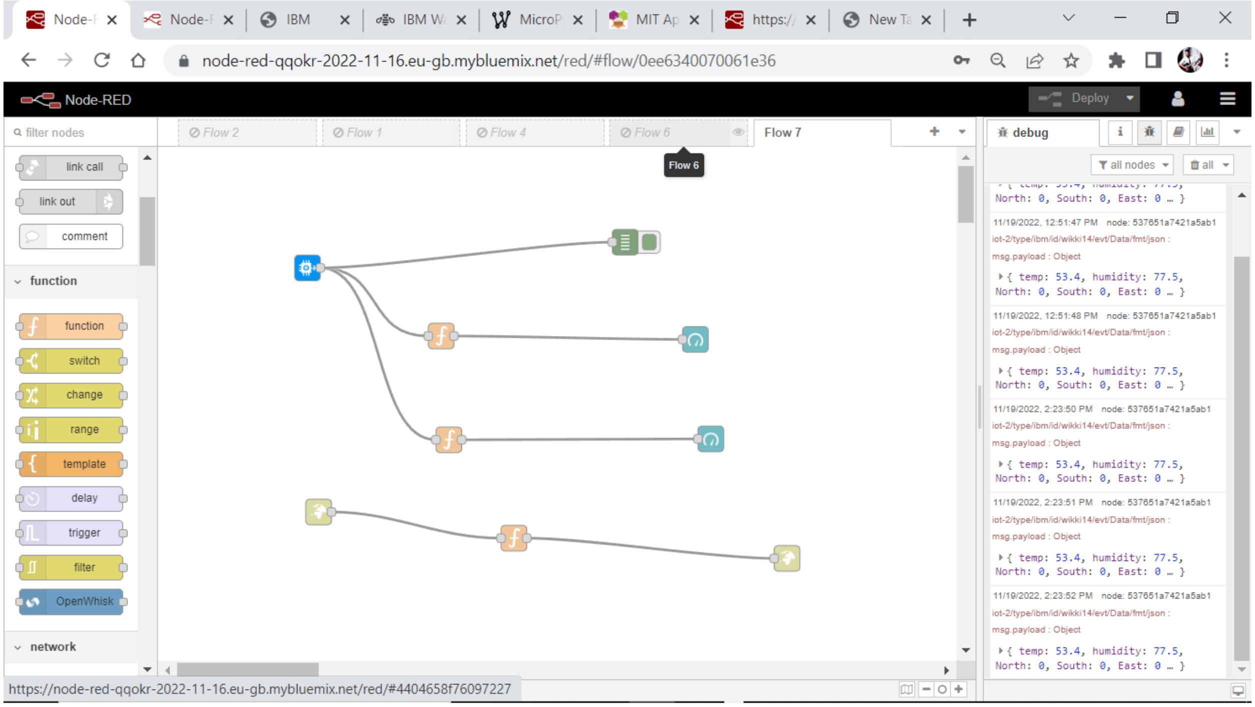


	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
□	ultrasonic_sensor	Disconnected	arduino_uno	Device	Nov 10, 2022 9:51 AM		210219106039@smartinternz.com
✓	wikki14	● Connected	ibm	Device	Nov 17, 2022 7:07 PM		210219106039@smartinternz.com

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":12.1,"humidity":77.5,"North":0,"South":...	json	a few seconds ago
Data	{"temp":12.1,"humidity":77.5,"North":0,"South":...	json	a few seconds ago
Data	{"temp":12.1,"humidity":77.5,"North":0,"South":...	json	a few seconds ago

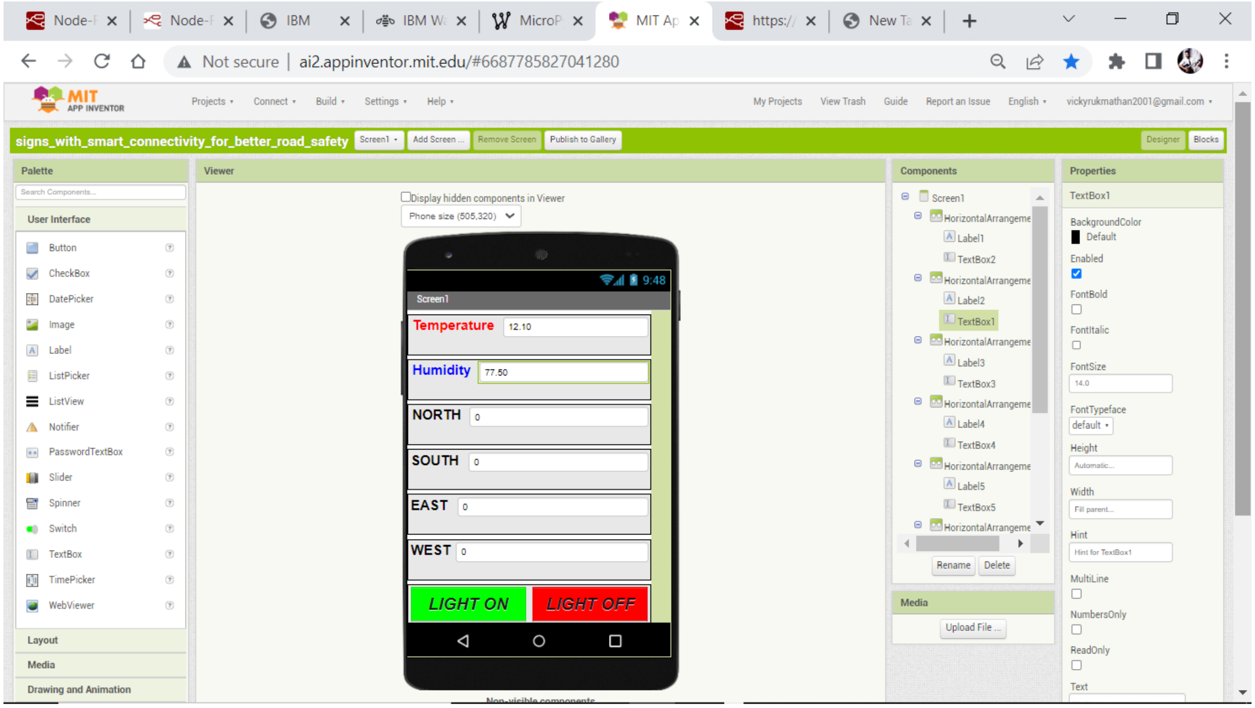
NODE-RED CONNECT WITH MIT APP INVENTOR:



```
North: 0, South: 0, East: 0 … }
11/19/2022, 12:51:47 PM   node: 537651a7421a5ab1
iot-2/type/ibm/id/wikki14/evt/Data/fmt/json :
msg.payload : Object
 ▸{ temp: 53.4, humidity: 77.5,
North: 0, South: 0, East: 0 … }
11/19/2022, 12:51:48 PM   node: 537651a7421a5ab1
iot-2/type/ibm/id/wikki14/evt/Data/fmt/json :
msg.payload : Object
 ▸{ temp: 53.4, humidity: 77.5,
North: 0, South: 0, East: 0 … }
11/19/2022, 2:23:50 PM   node: 537651a7421a5ab1
iot-2/type/ibm/id/wikki14/evt/Data/fmt/json :
msg.payload : Object
 ▸{ temp: 53.4, humidity: 77.5,
North: 0, South: 0, East: 0 … }
11/19/2022, 2:23:51 PM   node: 537651a7421a5ab1
iot-2/type/ibm/id/wikki14/evt/Data/fmt/json :
msg.payload : Object
 ▸{ temp: 53.4, humidity: 77.5,
North: 0, South: 0, East: 0 … }
11/19/2022, 2:23:52 PM   node: 537651a7421a5ab1
iot-2/type/ibm/id/wikki14/evt/Data/fmt/json :
msg.payload : Object
 ▸{ temp: 53.4, humidity: 77.5,
North: 0, South: 0, East: 0 … }
```

MIT APP INVENTOR UI DESIGN:

REF:http://ai2.appinventor.mit.edu/#6687785827041280



□ Display hidden components in Viewer

Phone size (505,320)

Screen1

Temperature	12.10
Humidity	77.50
NORTH	0
SOUTH	0
EAST	0
WEST	0

LIGHT ON LIGHT OFF

TextBox1

BackgroundColor: Default

Enabled: ☑

FontBold: □

FontItalic: □

FontSize: 14.0

FontTypeface: default

Height: Automatic...

Width: Fill parent...

Hint: Hint for TextBox1

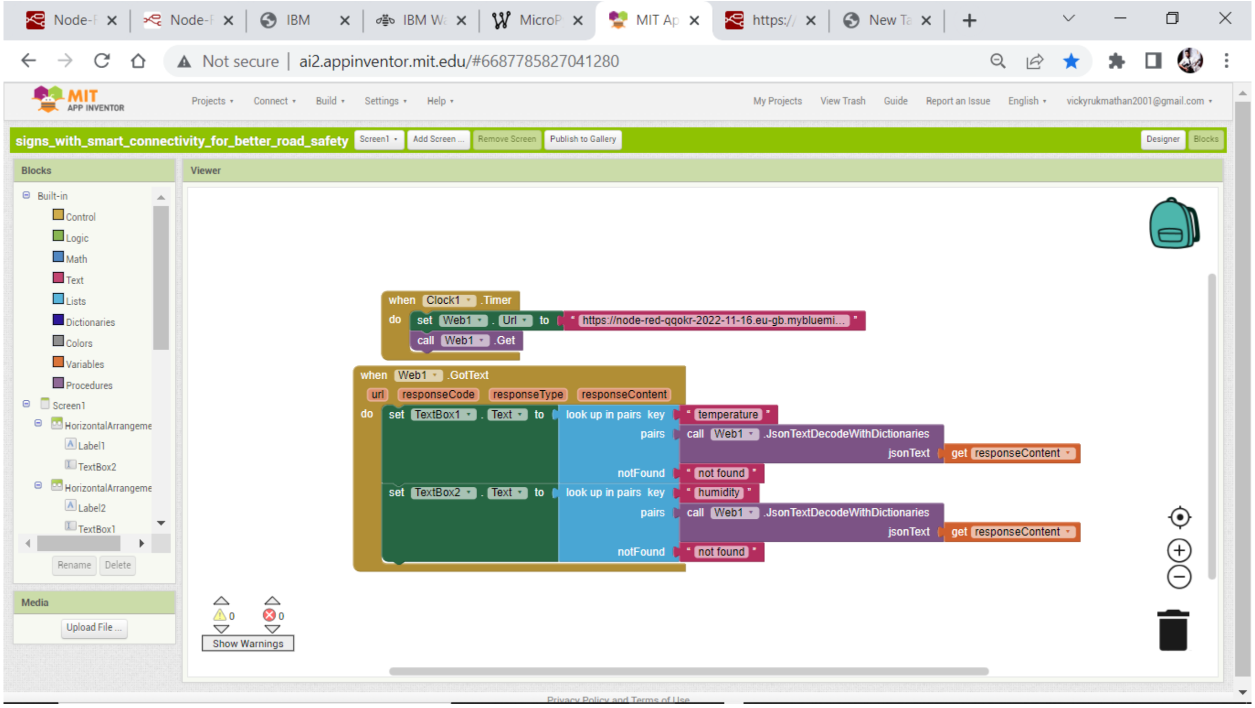
MultiLine: □

NumbersOnly: □

ReadOnly: □

Text

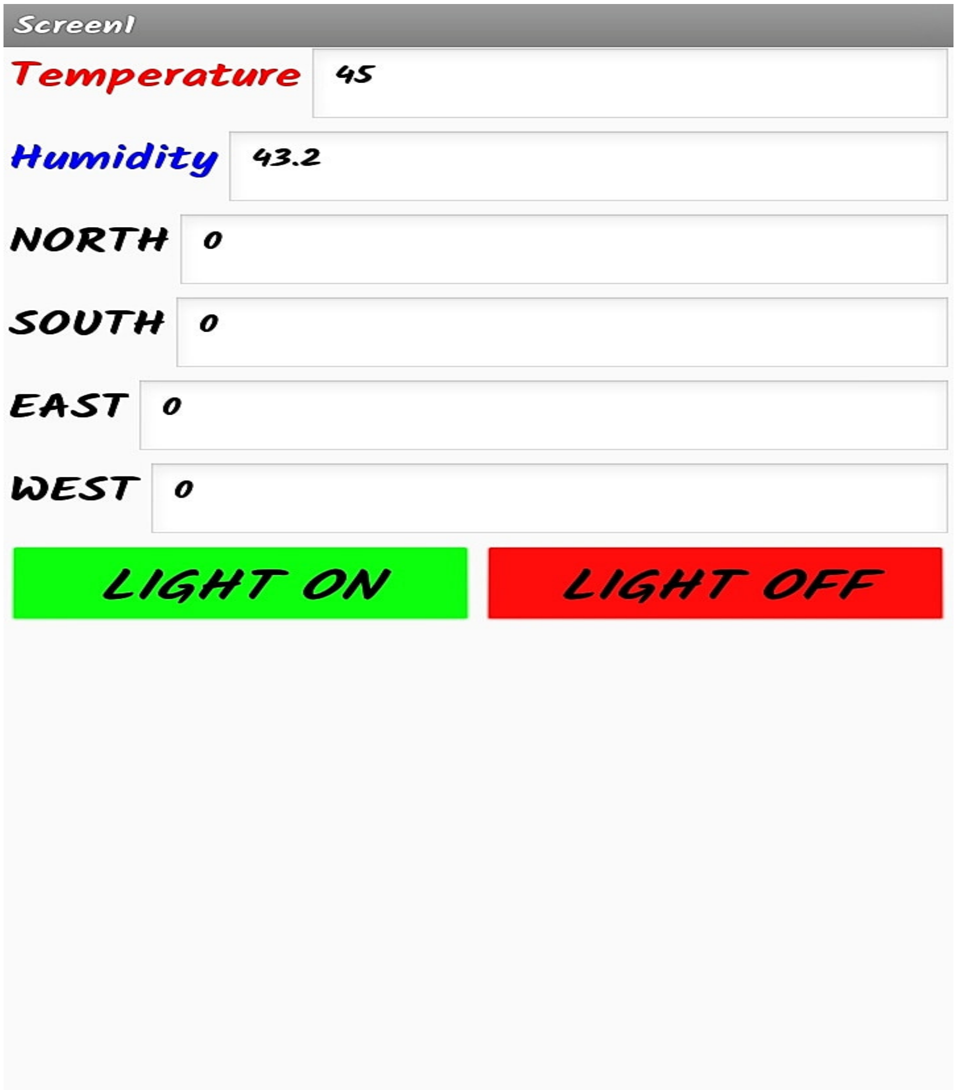
MIT APP INVENTOR BACKEND DESIGN:



Not secure | ai2.appinventor.mit.edu/#6687785827041280
MIT APP INVENTOR
Projects ▾ Connect ▾ Build ▾ Settings ▾ Help ▾
My Projects View Trash Guide Report an Issue English ▾ vickyrukmathan2001@gmail.com ▾
signs_with_smart_connectivity_for_better_road_safety
Screen1 ▾ Add Screen ... Remove Screen Publish to Gallery
Designer Blocks
Blocks
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen1
HorizontalArrangeme
Label1
TextBox2
Label2
TextBox1
Rename Delete
Media
Upload File ...
Viewer
Show Warnings
Privacy Policy and Terms of Use

```
when Clock1 .Timer
do  set Web1 . Url to " https://node-red-qqokr-2022-11-16.eu-gb.mybluemi... "
    call Web1 .Get

when Web1 .GotText
 url  responseCode  responseType  responseContent
do  set TextBox1 . Text to  look up in pairs key " temperature "
                                           pairs  call Web1 .JsonTextDecodeWithDictionaries
                                                                          jsonText  get responseContent
                                        notFound " not found "
    set TextBox2 . Text to  look up in pairs key " humidity "
                                           pairs  call Web1 .JsonTextDecodeWithDictionaries
                                                                          jsonText  get responseContent
                                        notFound " not found "
```

SPRINT 3 -DELIVERY
OUTPUT-DISPLAYFROM MIT APP



Temperature	45
Humidity	43.2
NORTH	0
SOUTH	0
EAST	0
WEST	0