#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

#include <SimpleTimer.h>

#include <SoftwareSerial.h>

SoftwareSerial arduino(14, 12);

char auth[] = "94dbc812be9c49459ca8197d0af68b88";

char ssid[] = "dreamerindia";

char pass[] = "ravivarma";

SimpleTimer blynkTimer, arduinoTimer;

String hb = "", oxy = "", gl = "", eb = "", ub = "";

String arduino\_data;

bool dataEnd = false;

void setup()

{

Serial.begin(9600);

arduino.begin(9600);

Blynk.begin(auth, ssid, pass);

blynkTimer.setInterval(1000, send2blynk);

arduinoTimer.setInterval(1000, readArduino);

}

BLYNK\_WRITE(V15)

{

int x=param[0].asInt();

int y=param[1].asInt();

if (x==128 && y==128)

{

arduino.print("stop#");

Serial.println("stop#");

}

if (x==0)

{

arduino.print("left#");//

Serial.println("left#");

}

if (x==255)

{

arduino.print("right#");//

Serial.println("right#");

}

if (y==255)

{

arduino.print("forward#");//

Serial.println("forward#");

}

if (y==0)

{

arduino.print("reverse#");//

Serial.println("reverse#");

}

}

BLYNK\_WRITE(V16)

{

int i=param.asInt();

if (i==2)

{

arduino.print("line#");

Serial.println("line#");

}

if (i==1)

{

arduino.print("manual#");

Serial.println("manual#");

}

}

void readArduino() {

while (arduino.available()) {

char c = (char)arduino.read();

// Serial.print(c);

if (c == ';') {

dataEnd = true;

break;

}

arduino\_data = arduino\_data + c ;

}

if (dataEnd == true) {

hb = getValue(arduino\_data,',',0);

oxy = getValue(arduino\_data,',',1);

gl = getValue(arduino\_data,',',2);

eb = getValue(arduino\_data,',',3);

ub = getValue(arduino\_data,',',4);

Serial.print("hb:");Serial.println(hb);

Serial.print("oxy:");Serial.println(oxy);

Serial.print("gl:");Serial.println(gl);

Serial.print("eb:");Serial.println(eb);

Serial.print("ub:");Serial.println(ub);

arduino\_data = "";

dataEnd = false;

}

}

String getValue(String data, char separator, int index)

{

int found = 0;

int strIndex[] = { 0, -1 };

int maxIndex = data.length() - 1;

for (int i = 0; i <= maxIndex && found <= index; i++) {

if (data.charAt(i) == separator || i == maxIndex) {

found++;

strIndex[0] = strIndex[1] + 1;

strIndex[1] = (i == maxIndex) ? i+1 : i;

}

}

return found > index ? data.substring(strIndex[0], strIndex[1]) : "";

}

void send2blynk() {

Blynk.virtualWrite(10, hb);

Blynk.virtualWrite(11, oxy);

Blynk.virtualWrite(12, gl);

Blynk.virtualWrite(13, eb);

Blynk.virtualWrite(14, ub);

}

void loop()

{

Blynk.run();

blynkTimer.run();

arduinoTimer.run();

}