#include <WiFi.h>

#include <WebSocketsServer.h>

const char\* ssid = "Galaxy A03s8361";

const char\* password = "koVacorp";

WebSocketsServer webSocket = WebSocketsServer(8080);

String time1;

String defaultlight = "good";

String light1 = "good", light2 = "good", light3 = "good", light4 = "good";

String light5 = "good", light6 = "good", light7 = "good", light8 = "good";

void setup() {

Serial.begin(115200);

pinMode(23, OUTPUT);

pinMode(22, OUTPUT);

pinMode(21, OUTPUT);

pinMode(19, OUTPUT);

pinMode(18, OUTPUT);

pinMode(5, OUTPUT);

pinMode(17, OUTPUT);

pinMode(16, OUTPUT);

pinMode(36, INPUT);

pinMode(39, INPUT);

pinMode(34, INPUT);

pinMode(35, INPUT);

pinMode(32, INPUT);

pinMode(33, INPUT);

pinMode(25, INPUT);

pinMode(26, INPUT);

pinMode(27, INPUT);

pinMode(14, INPUT);

WiFi.begin(ssid, password);

while (WiFi.status() != WL\_CONNECTED) {

delay(500);

Serial.print(".");

}

Serial.println();

Serial.print("IP Address: ");

Serial.println(WiFi.localIP());

webSocket.begin();

webSocket.onEvent(webSocketEvent);

}

void loop() {

webSocket.loop();

updateLightStatus();

}

void webSocketEvent(uint8\_t num, WStype\_t type, uint8\_t \*payload, size\_t length) {

if (type == WStype\_CONNECTED) {

Serial.printf("Client %u connected\n", num);

sendLightStatus(num);

} else if (type == WStype\_TEXT) {

Serial.printf("Received from client %u: %s\n", num, payload);

sendLightStatus(num);

} else if (type == WStype\_DISCONNECTED) {

Serial.printf("Client %u disconnected\n", num);

}

}

void sendLightStatus(uint8\_t clientNum) {

String jsonResponse = "{";

jsonResponse += "\"timeStatus\":\"" + time1 + "\",";

jsonResponse += "\"light1\":\"" + light1 + "\",";

light1 = defaultlight;

jsonResponse += "\"light2\":\"" + light2 + "\",";

light2 = defaultlight;

jsonResponse += "\"light3\":\"" + light3 + "\",";

light3 = defaultlight;

jsonResponse += "\"light4\":\"" + light4 + "\",";

light4 = defaultlight;

jsonResponse += "\"light5\":\"" + light5 + "\",";

light5 = defaultlight;

jsonResponse += "\"light6\":\"" + light6 + "\",";

light6 = defaultlight;

jsonResponse += "\"light7\":\"" + light7 + "\",";

light7 = defaultlight;

jsonResponse += "\"light8\":\"" + light8 + "\"";

light8 = defaultlight;

jsonResponse += "}";

webSocket.sendTXT(clientNum, jsonResponse);

}

void updateLightStatus() {

if (analogRead(4) < 3000 || analogRead(36) < 200) {

time1 = "It is night time";

digitalWrite(23, HIGH);

digitalWrite(22, HIGH);

digitalWrite(21, HIGH);

digitalWrite(19, HIGH);

digitalWrite(18, HIGH);

digitalWrite(5, HIGH);

digitalWrite(17, HIGH);

digitalWrite(16, HIGH);

if (analogRead(32) < 100) {

light1 = "fault";

}

if (analogRead(33) < 100) {

light2 = "fault";

}

if (analogRead(25) < 100) {

light3 = "fault";

}

if (analogRead(26) < 100) {

light4 = "fault";

}

if (analogRead(39) < 1000) {

light5 = "fault";

}

if (analogRead(34) < 200) {

light6 = "fault";

}

if (analogRead(35) < 2250) {

light7 = "fault";

}

if (analogRead(32) < 650) {

light8 = "fault";

}

} else {

time1 = "It is day time";

digitalWrite(18, LOW);

digitalWrite(5, LOW);

digitalWrite(17, LOW);

digitalWrite(16, LOW);

digitalWrite(22, LOW);

digitalWrite(23, LOW);

digitalWrite(21, LOW);

digitalWrite(19, LOW);

}

}