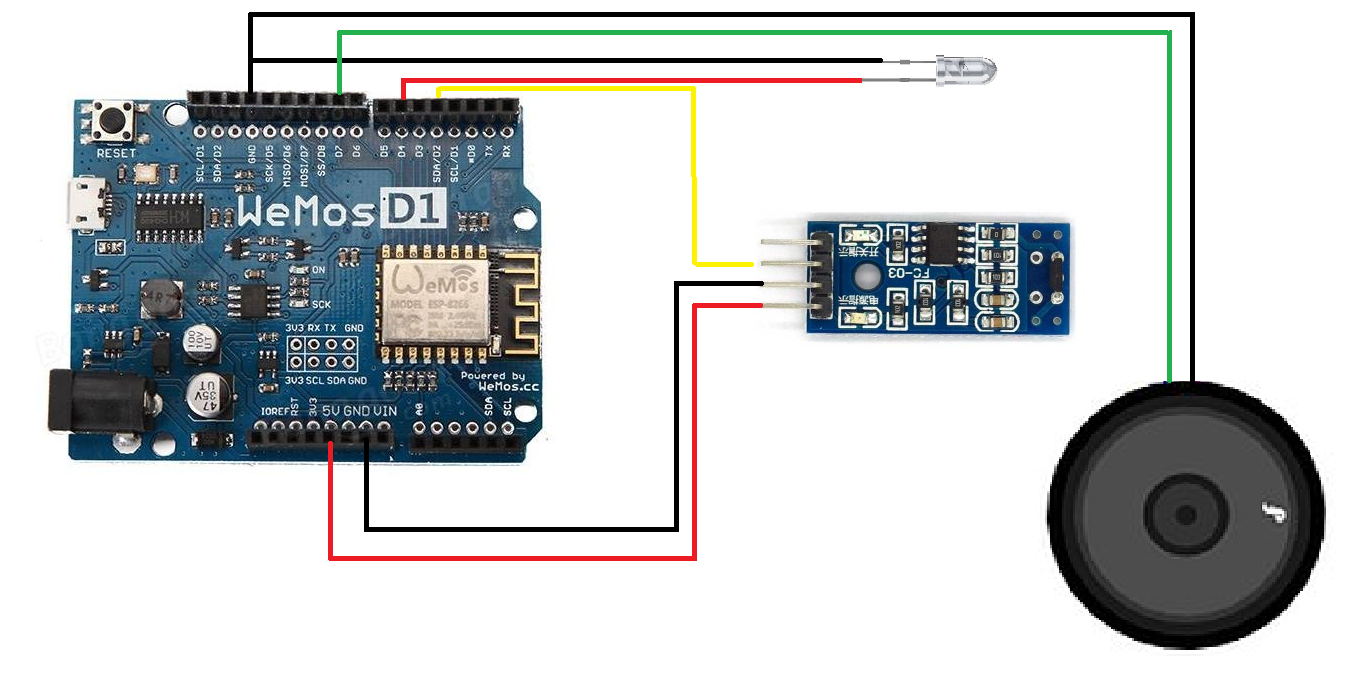
Arduino版1(D1)

元件:霍爾門磁開關

LED

喇叭

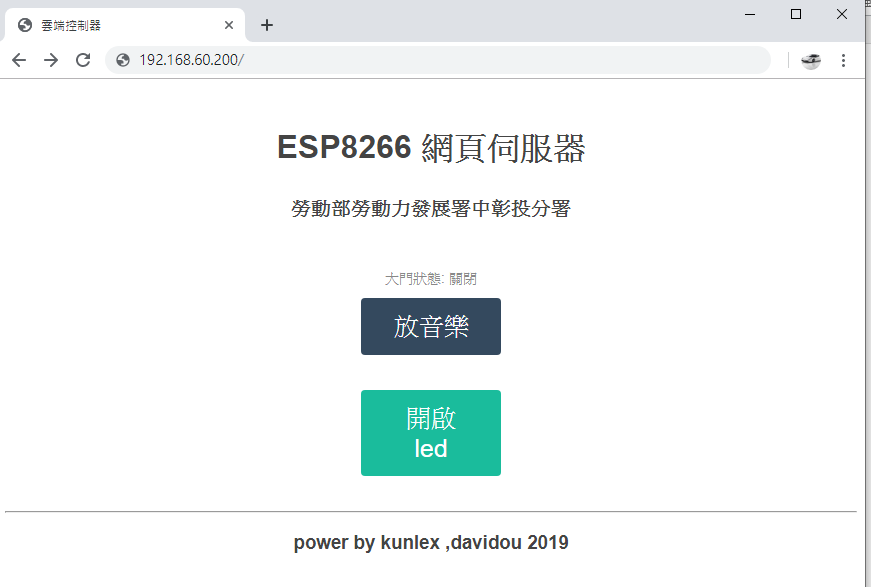


連線IP 192.168.60.200

可以透過192.168.60.200看IOT狀態

透過GET <http://192.168.60.200/openLED> 打開LED

透過GET <http://192.168.60.199/openmusic> 播放音樂



#define NOTE\_B0 31

#define NOTE\_C1 33

#define NOTE\_CS1 35

#define NOTE\_D1 37

#define NOTE\_DS1 39

#define NOTE\_E1 41

#define NOTE\_F1 44

#define NOTE\_FS1 46

#define NOTE\_G1 49

#define NOTE\_GS1 52

#define NOTE\_A1 55

#define NOTE\_AS1 58

#define NOTE\_B1 62

#define NOTE\_C2 65

#define NOTE\_CS2 69

#define NOTE\_D2 73

#define NOTE\_DS2 78

#define NOTE\_E2 82

#define NOTE\_F2 87

#define NOTE\_FS2 93

#define NOTE\_G2 98

#define NOTE\_GS2 104

#define NOTE\_A2 110

#define NOTE\_AS2 117

#define NOTE\_B2 123

#define NOTE\_C3 131

#define NOTE\_CS3 139

#define NOTE\_D3 147

#define NOTE\_DS3 156

#define NOTE\_E3 165

#define NOTE\_F3 175

#define NOTE\_FS3 185

#define NOTE\_G3 196

#define NOTE\_GS3 208

#define NOTE\_A3 220

#define NOTE\_AS3 233

#define NOTE\_B3 247

#define NOTE\_C4 262

#define NOTE\_CS4 277

#define NOTE\_D4 294

#define NOTE\_DS4 311

#define NOTE\_E4 330

#define NOTE\_F4 349

#define NOTE\_FS4 370

#define NOTE\_G4 392

#define NOTE\_GS4 415

#define NOTE\_A4 440

#define NOTE\_AS4 466

#define NOTE\_B4 494

#define NOTE\_C5 523

#define NOTE\_CS5 554

#define NOTE\_D5 587

#define NOTE\_DS5 622

#define NOTE\_E5 659

#define NOTE\_F5 698

#define NOTE\_FS5 740

#define NOTE\_G5 784

#define NOTE\_GS5 831

#define NOTE\_A5 880

#define NOTE\_AS5 932

#define NOTE\_B5 988

#define NOTE\_C6 1047

#define NOTE\_CS6 1109

#define NOTE\_D6 1175

#define NOTE\_DS6 1245

#define NOTE\_E6 1319

#define NOTE\_F6 1397

#define NOTE\_FS6 1480

#define NOTE\_G6 1568

#define NOTE\_GS6 1661

#define NOTE\_A6 1760

#define NOTE\_AS6 1865

#define NOTE\_B6 1976

#define NOTE\_C7 2093

#define NOTE\_CS7 2217

#define NOTE\_D7 2349

#define NOTE\_DS7 2489

#define NOTE\_E7 2637

#define NOTE\_F7 2794

#define NOTE\_FS7 2960

#define NOTE\_G7 3136

#define NOTE\_GS7 3322

#define NOTE\_A7 3520

#define NOTE\_AS7 3729

#define NOTE\_B7 3951

#define NOTE\_C8 4186

#define NOTE\_CS8 4435

#define NOTE\_D8 4699

#define NOTE\_DS8 4978

// notes in the melody:

int melody[] = {

NOTE\_E4, NOTE\_C4, NOTE\_G3, NOTE\_C4, NOTE\_D4, NOTE\_G4,

NOTE\_D4, NOTE\_E4, NOTE\_D4, NOTE\_G3, NOTE\_C4

};

// note durations: 4 = quarter note, 8 = eighth note, etc.:

int noteDurations[] = {

4,4,4,4,4,1.3,

4,4,4,4,1

};

int LEDpin=D4; //LED

int doorpin = D2;//霍爾門磁

int OutputRadioPin=D7; //音樂pin

int windowstate;//大門開關狀態 0是關 1是開

#include <ESP8266WiFi.h>

#include <ESP8266WebServer.h>

const char\* ssid = "ASUS\_iot\_2G";

const char\* password = "1121314151";

ESP8266WebServer server(80);

void homepage() {

server.send(200, "text/html", SendHTML(windowstate));

Serial.println("同學開啟了網頁");

}

void setup() {

//初始化串口

Serial.begin(9600);

//初始化網絡

WiFi.mode(WIFI\_STA);

WiFi.begin(ssid, password);

WiFi.config(IPAddress(192,168,60,200), // IP位址

IPAddress(192,168,60,254), // 閘道（gateway）位址

IPAddress(255,255,255,0)); // 網路遮罩（netmask）

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

delay(500);

Serial.print(".");

}

Serial.println("");

Serial.print("IP Address: ");

Serial.println(WiFi.localIP());

//初始化WebServer

server.on("/", homepage);

server.on("/openmusic", handle\_openmusic);//打開音樂

server.on("/openLED", handle\_openLED);//開啟led

server.begin();

Serial.println("HTTP server started");

pinMode(doorpin, INPUT); //霍爾門磁

pinMode(LEDpin,OUTPUT);

pinMode(OutputRadioPin,OUTPUT);

music();

}

void loop() {

windowstate = digitalRead(doorpin);

Serial.println(windowstate);

if(windowstate==1){

digitalWrite(LEDpin, HIGH);

server.send(200, "text/html", SendHTML(windowstate));

music();

}

if(windowstate==0){

digitalWrite(LEDpin, LOW);

server.send(200, "text/html", SendHTML(windowstate));

}

//監聽客戶請求並處理

server.handleClient();

delay(500);

}

void music() {//放音樂

for (int thisNote = 0; thisNote < 11; thisNote++) {

//四分音符= 1000/4，八分音符= 1000/8，依此類推。

int noteDuration = 1000/noteDurations[thisNote];

tone(OutputRadioPin, melody[thisNote],noteDuration);

//為了區分音符，請在它們之間設置最短時間。

//加速的持續時間+ 30％似乎效果良好：

int pauseBetweenNotes = noteDuration \* 1.0;

delay(pauseBetweenNotes);

// 音符間的空白時間

noTone(8);

}

}

void blink()

{

digitalWrite(LEDpin, HIGH); // turn the LED on (HIGH is the voltage level)

delay(100); // wait for a second

digitalWrite(LEDpin, LOW); // turn the LED off by making the voltage LOW

delay(100); // wait for a second

}

void handle\_openmusic() {//打開音樂

server.send(200, "text/html", SendHTML(windowstate));

music();

Serial.println("手動放音樂");

}

void handle\_openLED() {//開啟led

server.send(200, "text/html", SendHTML(windowstate));

blink();

blink();

blink();

Serial.println("手動開啟led");

}

String SendHTML(uint8\_t windowstate){

String ptr = "<!DOCTYPE html> <html>\n";

ptr +="<head><meta name=\"viewport\" content=\"width=device-width, initial-scale=1.0, user-scalable=no\"><meta charset=\"UTF-8\">\n";

ptr +="<title>雲端控制器</title>\n";

ptr +="<style>html { font-family: Helvetica; display: inline-block; margin: 0px auto; text-align: center;}\n";

ptr +="body{margin-top: 50px;} h1 {color: #444444;margin: 50px auto 30px;} h3 {color: #444444;margin-bottom: 50px;}\n";

ptr +=".button {display: block;width: 80px;background-color: #1abc9c;border: none;color: white;padding: 13px 30px;text-decoration: none;font-size: 25px;margin: 0px auto 35px;cursor: pointer;border-radius: 4px;}\n";

ptr +=".button-on {background-color: #1abc9c;}\n";

ptr +=".button-on:active {background-color: #16a085;}\n";

ptr +=".button-off {background-color: #34495e;}\n";

ptr +=".button-off:active {background-color: #2c3e50;}\n";

ptr +="p {font-size: 14px;color: #888;margin-bottom: 10px;}\n";

ptr +="</style>\n";

ptr +="</head>\n";

ptr +="<body>\n";

ptr +="<h1> ESP8266 網頁伺服器</h1>\n";

ptr +="<h3>勞動部勞動力發展署中彰投分署</h3>\n";

if(windowstate==1)

{ptr +="<p>大門狀態: 開啟</p>\n";}

else

{ptr +="<p>大門狀態: 關閉</p>\n";}

ptr +="<a class=\"button button-off\" href=\"/openmusic\">放音樂</a>\n";

ptr +="<a class=\"button button-on\" href=\"/openLED\">開啟led</a>\n";

ptr +="<hr><h3>power by kunlex ,davidou 2019 </h3>\n";

ptr +="</body>\n";

ptr +="</html>\n";

return ptr;

}