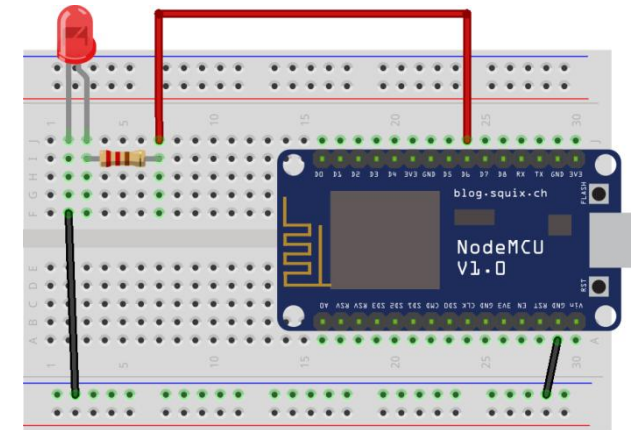
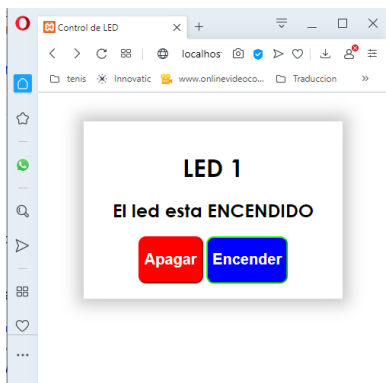




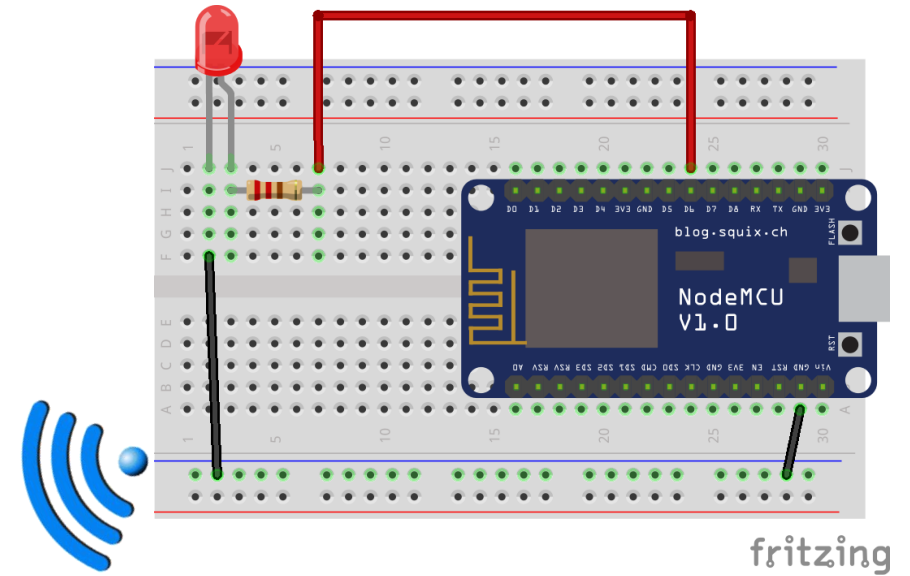
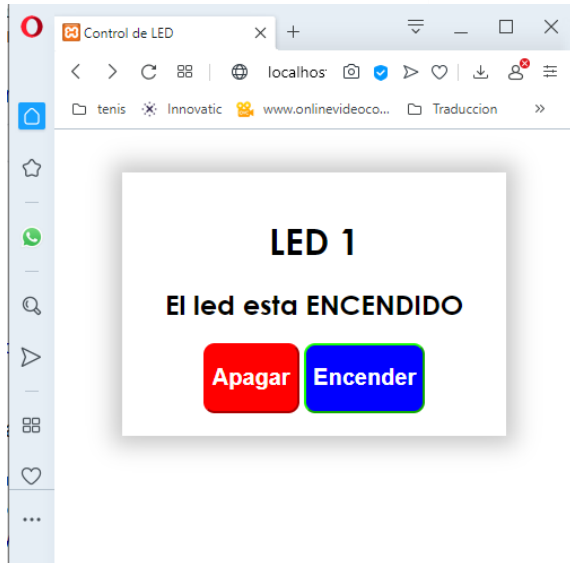
Efrén Juárez

# NodeMCU ESP8266

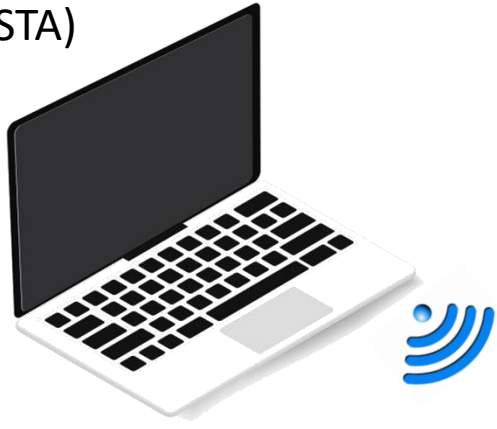
## Control de Led por WiFi



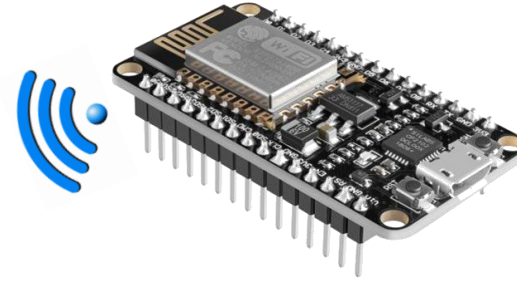
# Control de Led por WiFi



Station (STA)



Station (STA)



Station (STA)



Punto de acceso inalámbrico (AP)

Nombre de Red

SSID (Service Set Identifier)

# Código conexión WiFi

```
#include <ESP8266WiFi.h>

String ssid      = "ejcuthh";
String password = "12345678";

byte cont = 0;
byte max_intentos = 50;

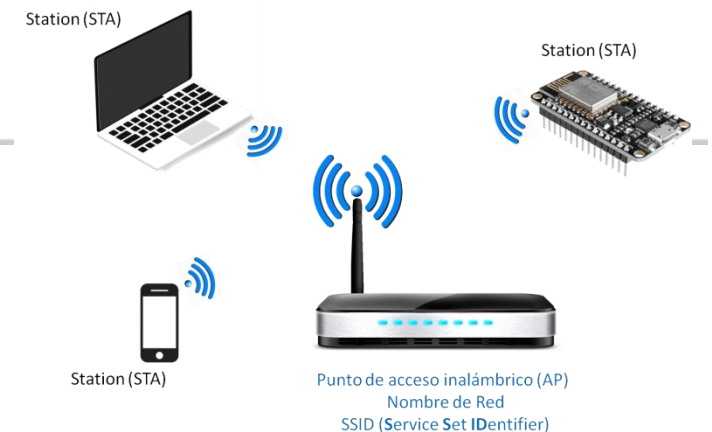
void setup() {
    // Inicia Serial
    Serial.begin(115200);
    Serial.println("\n");

    // Conexión WIFI
    WiFi.begin(ssid, password);
    while (WiFi.status() != WL_CONNECTED and cont < max_intentos) { //Cuenta hasta 50
        cont++;
        delay(500);
        Serial.print(".");
    }
}
```

```
Serial.println("");

if (cont < max_intentos) { //Si se conectó
    Serial.println("*****");
    Serial.print("Conectado a la red WiFi: ");
    Serial.println(WiFi.SSID());
    Serial.print("IP: ");
    Serial.println(WiFi.localIP());
    Serial.print("macAddress: ");
    Serial.println(WiFi.macAddress());
    Serial.println("*****");
}
else { //No se conectó
    Serial.println("-----");
    Serial.println("Error de conexion");
    Serial.println("-----");
}
}

void loop() {
}
```



# Código Página web

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Control de LED</title>
7 </head>
8 <body style='font-family: Century gothic; width: 800;*>
9     <center>
10     <div style='box-shadow: 0px 0px 20px 8px rgba(0,0,0,0.22); padding: 20px; width: 300px; display: inline-block; margin: 30px;*>
11         <h1>LED 1</h1>
12         <h2>El led esta ENCENDIDO</h2>
13         <button style='background-color:red; color:white; border-radius: 10px; border-color: rgb(255, 0, 0);'
14             type='button' onClick=location.href='/LED=OFF'><h2>Apagar</h2>
15         </button>
16         <button style='background-color:blue; color:white; border-radius: 10px; border-color: rgb(25, 255, 4);'
17             type='button' onClick=location.href='/LED=ON'><h2>Encender</h2>
18         </button>
19     </div>
20 </center>
21 </body>
22 </html>
```

# Código

```
#include <ESP8266WiFi.h>

#define pinLed D6
String ssid      = " ";
String password = " ";
WiFiServer server(80); //objeto de la clase WiFiServer
int estado = 0;

void setup() {
  // Inicia Serial
  Serial.begin(115200);
  Serial.println("\n");

  pinMode(pinLed, OUTPUT);

  // Conexión WIFI
  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
  }
  Serial.println("");
  Serial.println("*****");
  Serial.print("Conectado a la red WiFi: ");
  Serial.println(WiFi.SSID());
  Serial.print("IP: ");
  Serial.println(WiFi.localIP());
  Serial.print("macAdress: ");
  Serial.println(WiFi.macAddress());
  Serial.println("*****");

  server.begin(); //begin() levantamos el servidor
  digitalWrite(pinLed, 0);
}
```

# Código (continuación)

```
void loop() {

  WiFiClient client = server.available(); //objeto de la clase WiFiClient
  // available() detecta un cliente nuevo del objeto de la clase WifiServer
  if(!client){
    return;
  }

  Serial.println("Nuevo cliente...");
  while(!client.available()){ //espera a un cliente disponible
    delay(1);
  }

  String petition = client.readStringUntil('\r'); //lee la petition del cliente
  Serial.println(petition);
  client.flush(); //limpia la petition del cliente

  if(petition.indexOf('LED=ON') != -1)
    estado=1;
  if(petition.indexOf('LED=OFF') != -1)
    estado=0;
  |
  digitalWrite(pinLed, estado);
```

```
client.println("HTTP/1.1 200 OK");
client.println("");
client.println("");
client.println("");
client.println("");
```

//INICIA LA PAGINA

```
client.println("<!DOCTYPE html><html lang='en'><head> <meta charset='UTF-8'><meta :
client.println("<title>Control de LED</title></head><body style='font-family: Centu
client.println("<div style='box-shadow: 0px 0px 20px 8px rgba(0,0,0,0.22); padding:
client.println("<h1>LED 1</h1>");
client.println("<h2>El led esta ENCENDIDO</h2>");
client.println("<button style='background-color:red; color:white; border-radius: :
client.println("type='button' onClick=location.href='/LED=OFF'><h2>Apagar</h2>");
client.println("</button>");
client.println("<button style='background-color:blue; color:white; border-radius: :
client.println("type='button' onClick=location.href='/LED=ON'><h2>Encender</h2>");
client.println("</button></div></center></body></html>");
```

//FIN DE LA PAGINA

```
delay(10);
Serial.println("Petición finalizada");
Serial.println("");
```

```
}
```





Efrén Juárez

# NodeMCU ESP8266

## Control de Led por WiFi

