

Code for the Simple ESP32 Web Server

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#include <WiFi.h>
#include <WebServer.h>

/* Put your SSID & Password */
const char* ssid = "Ashraf ESP"; // Enter SSID here
const char* password = "*****"; //Enter Password here

/* Put IP Address details */
IPAddress local_ip(192,168,0,165);
IPAddress gateway(192,168,0,1);
IPAddress subnet(255,255,255,0);

WebServer server(80);

uint8_t LEDOnePin = 2;
bool LEDOneStatus = LOW;

uint8_t LEDTwoPin = 5;
bool LEDTwoStatus = LOW;

void setup() {
  Serial.begin(115200);
  pinMode(LEDOnePin, OUTPUT);
  pinMode(LEDTwoPin, OUTPUT);

  WiFi.softAP(ssid, password);
  WiFi.softAPConfig(local_ip, gateway, subnet);
  delay(100);

  server.on("/", handle_OnConnect);
  server.on("/led1on", handle_led1on);
  server.on("/led1off", handle_led1off);
  server.on("/led2on", handle_led2on);
  server.on("/led2off", handle_led2off);
  server.onNotFound(handle_NotFound);

  server.begin();
  Serial.println("HTTP server Has started");
}

void loop() {
  server.handleClient();
  if(LEDOneStatus)
  {digitalWrite(LEDOnePin, HIGH);}
  else
  {digitalWrite(LEDOnePin, LOW);}

  if(LEDTwoStatus)
  {digitalWrite(LEDTwoPin, HIGH);}
  else
  {digitalWrite(LEDTwoPin, LOW);}
}

void handle_OnConnect() {
```

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    LEDOneStatus = LOW;
    LEDTwoStatus = LOW;
    Serial.println("GPIO2 Status: OFF | GPIO5 Status: OFF");
    server.send(200, "text/html", SendHTML(LEDOneStatus,LEDTwoStatus));
}

void handle_led1on() {
    LEDOneStatus = HIGH;
    Serial.println("GPIO2 Status: ON");
    server.send(200, "text/html", SendHTML(true,LEDTwoStatus));
}

void handle_led1off() {
    LEDOneStatus = LOW;
    Serial.println("GPIO2 Status: OFF");
    server.send(200, "text/html", SendHTML(false,LEDTwoStatus));
}

void handle_led2on() {
    LEDTwoStatus = HIGH;
    Serial.println("GPIO5 Status: ON");
    server.send(200, "text/html", SendHTML(LEDOneStatus,true));
}

void handle_led2off() {
    LEDTwoStatus = LOW;
    Serial.println("GPIO5 Status: OFF");
    server.send(200, "text/html", SendHTML(LEDOneStatus,false));
}

void handle_NotFound(){
    server.send(404, "text/plain", "Not found");
}

String SendHTML(uint8_t led1stat,uint8_t led2stat){
    String ptr = "<!DOCTYPE html> <html>\n";
    ptr += "<head><meta name=\"viewport\" content=\"width=device-width, initial-
scale=1.0, user-scalable=no\">\n";
    ptr += "<title>LED Control</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:
#3498db;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: #3498db;}\n";
    ptr += ".button-on:active {background-color: #2980b9;}\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>ESP32 Web Server Text</h1>\n";
    ptr += "<h3>Using AP Mode</h3>\n";
}

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    if(led1stat)
    {ptr +="<p>LED1 Status: ON</p><a class=\"button button-off\"
href=\"/led1off\">OFF</a>\n";}
    else
    {ptr +="<p>LED1 Status: OFF</p><a class=\"button button-on\"
href=\"/led1on\">ON</a>\n";}

    if(led2stat)
    {ptr +="<p>LED2 Status: ON</p><a class=\"button button-off\"
href=\"/led2off\">OFF</a>\n";}
    else
    {ptr +="<p>LED2 Status: OFF</p><a class=\"button button-on\"
href=\"/led2on\">ON</a>\n";}

    ptr +="</body>\n";
    ptr +="</html>\n";
    return ptr;
}
```