PROJECT NAME: CREATE A WEB SERVER

PROJECT DESCRIPTION:

web server is a place which stores prosses and delivers web pages to web clints.web clint is nothing but a web browsers on our laptops and smartphones

|  |  |
| --- | --- |
|  | #include<wifi.h>  #include <Webserver.h> |
|  | const char\* ssid = "ESP32"; |
|  | const char\* password = "12345678"; |
|  | IPAddress local\_ip(192,168,1,1); |
|  | IPAddress gateway(192,168,1,1); |
|  | IPAddress subnet(255,255,255,0); |
|  | WebServer server(80); |
|  | uint8\_t LED1pin = 4; |
|  | bool LED2status = LOW; |
|  | uint8\_t LED2pin =5; |
|  | bool LED2status =LOW; |
|  | void setup() { |
|  | Serial.begin(115200); |
|  | pinMode(LED1pin, OUTPUT); |
|  | pinMode(LED2pin, OUTPUT); |
|  | WiFi.softAP(ssid,password); |
|  | WiFi.softAPConfig(local\_ip, gateway, subnet); |
|  | delay(100); |
|  | server.on("/", handle\_OnConnect); |
|  | server.on("/led1on", handel\_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 started"); |
|  | } |
|  | void loop() { |
|  | server.handelClient(); |
|  | if(LED1status) |
|  | {digitalWrite(LED1pin, HIGH);} |
|  | else |
|  | {digitalWrite(LED1pin, LOW);} |
|  | if(LED2status) |
|  | {digitalWrite(LED2pin, HIGH);} |
|  | else |
|  | {digitalWrite(LED2pin, LOW);} |
|  | } |
|  | void handle\_OnConnect() { |
|  | LED1status =LOW; |
|  | LED2status =LOW; |
|  | Serial.println("GPI04 Status: OFF | GPI05 Status: OFF"); |
|  | server.send(200, "text/html", sendHTML(LED1status,LED2status)); |
|  | } |
|  | void handle\_led1on() { |
|  | LED1status = HIGH; |
|  | Serial.println("GPI04 Status: ON"); |
|  | server.send(200, "text/html", SendHTML(true,LED2status)); |
|  | } |
|  | void handel\_led1on() { |
|  | LED1status = HIGH; |
|  | serial.println("GPI04 Status: ON"); |
|  | server.send(200, "text/html", SendHTML(true,LED2status)); |
|  | } |
|  | void handle\_led1off() { |
|  | LED1status = LOW; |
|  | Serial.println("GPI04 Status: OFF"); |
|  | server.send(200, "text/html", sendHTML(false,LED2status)); |
|  | } |
|  | void handle\_led2on() { |
|  | LED2status=LOW; |
|  | Serial.println("GPI05 Status; OFF"); |
|  | server.send(200, "text/html", SendHTML(LED1status,true)); |
|  | } |
|  | void handle\_led2off() {LED2status = LOW; |
|  | Serial.println("GPI05 Status:OFF"); |
|  | server.send(200, "text/html", sendHTML(LED1status,false)); |
|  | } |
|  | void handle\_NotFound(){ |
|  | server.send("text/plain", "Not found"); |
|  | } |
|  | String SendHTML(unit8\_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: Helvetic; display: inline-block; margin: 0px auto; user-scalable=no\">\n"; |
|  | ptr +="body{margin-top: 50px;} h1 {color: #444444;margin; 50px auto 30px;} h3 {color: #444444;margine-bottom; 50px;}\n"; |
|  | ptr +=".button {display: block;width: 80px;background-color: #348db;border; none;color; white;padding: 13px 30px;text-decoration: none;font-size: 25px;margin: 0px auto 35px;cussor: 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;margine-bottom: 10px;}\n"; |
|  | ptr +="</style>\n"; |
|  | ptr +="</head>\n"; |
|  | ptr +="<body>\n"; |
|  | ptr +="<h1>ESP32 Web Server</h1>\n"; |
|  | ptr +="<h3>Using Access point(AP) Mode</h3>\n"; |
|  | 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\" herf=\"/led2on\">ON</a>\n";} |
|  | ptr +="</body>\n"; |
|  | ptr +="</html>\n"; |
|  | return ptr; |
|  | } |