Code:

|  |  |
| --- | --- |
| #include <FirebaseArduino.h> |  |
|  |  |
|  | #include <Firebase.h> |
|  |  |
|  | #include <ESP8266WiFi.h>; |
|  | #include <ESP8266WebServer.h> |
|  | #define LED\_BUILTIN 2 |
|  | String fireStatus = ""; |
|  | #define FIREBASE\_HOST "led-blink-0909.firebaseio.com" |
|  | #define FIREBASE\_AUTH "OvI15RqPtxQIG3XzxFyyXK5XLH12QFf4WUWbpCF7" |
|  | int flag=0; |
|  | String m\_no; |
|  | const char \*ssid = "MyESP8266AP"; |
|  | const char MAIN\_page[] PROGMEM = R"=====( |
|  | <!DOCTYPE html> |
|  | <html> |
|  | <body> |
|  |  |
|  | <h2>Enter Username & Password of wifi<h2> |
|  | <h3> HTML Form ESP8266</h3> |
|  |  |
|  | <form action="/action\_page" method="get"> |
|  | ID:<br> |
|  | <input type="text" name="ID" > |
|  | <br> |
|  | Password:<br> |
|  | <input type="password" name="Password" > |
|  | <br> |
|  | Model No:<br> |
|  | <input type="text" name="m\_no" > |
|  | <br><br> |
|  | <input type="submit" value="Submit"> |
|  | </form> |
|  |  |
|  | </body> |
|  | </html> |
|  | )====="; |
|  |  |
|  |  |
|  | ESP8266WebServer server(80); |
|  |  |
|  | void handleRoot() { |
|  | String s = MAIN\_page; |
|  | server.send(200, "text/html", s); |
|  | } |
|  | void handleForm() { |
|  | String ID = server.arg("ID"); |
|  | String Password = server.arg("Password"); |
|  | m\_no= server.arg("m\_no"); |
|  | Serial.print("ID:"); |
|  | Serial.println(ID); |
|  |  |
|  | Serial.print("Password:"); |
|  | Serial.println(Password); |
|  | Serial.print("Model Number:"); |
|  | Serial.println(m\_no); |
|  |  |
|  | String s = "<a href='/'> Go Back </a>"; |
|  | server.send(200, "text/html", s); |
|  | WiFi.begin(ID, Password); |
|  |  |
|  | while (WiFi.status() != WL\_CONNECTED) { |
|  | delay(500); |
|  | Serial.print("."); |
|  | digitalWrite(LED\_BUILTIN,HIGH); |
|  | delay(200); |
|  | digitalWrite(LED\_BUILTIN,LOW); |
|  | delay(200); |
|  | } |
|  | Serial.println(""); |
|  | Serial.print("Connected to "); |
|  | Serial.println(ID); |
|  | Serial.print("IP address: "); |
|  | Serial.println(WiFi.localIP()); |
|  | Firebase.begin(FIREBASE\_HOST, FIREBASE\_AUTH); |
|  | Firebase.setString(m\_no, "OFF"); |
|  | flag=1; |
|  |  |
|  | } |
|  |  |
|  |  |
|  | void setup() { |
|  | pinMode(LED\_BUILTIN, OUTPUT); |
|  | Serial.begin(115200); |
|  | WiFi.softAP(ssid); |
|  |  |
|  | Serial.println(); |
|  | Serial.print("Server IP address: "); |
|  | Serial.println(WiFi.softAPIP()); |
|  | Serial.print("Server MAC address: "); |
|  | Serial.println(WiFi.softAPmacAddress()); |
|  |  |
|  | server.on("/", handleRoot); |
|  | server.on("/action\_page", handleForm); |
|  | server.begin(); |
|  | Serial.println("Server listening"); |
|  |  |
|  | } |
|  |  |
|  | void loop() { |
|  | server.handleClient(); |
|  | if(flag==1) |
|  | { |
|  | Serial.println(m\_no); |
|  | fireStatus = Firebase.getString(m\_no); // get ld status input from firebase |
|  | Serial.println(fireStatus); |
|  | if (fireStatus == "ON") { |
|  | Serial.println("Led Turned ON"); |
|  | digitalWrite(LED\_BUILTIN, LOW); |
|  | } |
|  | else if (fireStatus == "OFF") { |
|  | Serial.println("Led Turned OFF"); |
|  | digitalWrite(LED\_BUILTIN, HIGH); |
|  | } |
|  | else { |
|  | Serial.println("Wrong Credential! Please send ON/OFF"); |
|  | } |
|  | } |
|  | } |

References:

<https://circuitdigest.com/microcontroller-projects/iot-firebase-controlled-led-using-esp8266-nodemcu>

<https://randomnerdtutorials.com/esp8266-web-server/>

<https://circuits4you.com/2016/12/16/esp8266-web-server-html/>