#include <ESP8266WiFi.h>

const char\* ssid = "iot";

const char\* password = "iot";

WiFiServer server(80);

int pin = 2;

void setup() {

Serial.begin(115200);

pinMode(pin, OUTPUT);

digitalWrite(pin, LOW);

Serial.println("Connecting to WiFi...");

WiFi.begin(ssid, password);

int retries = 0;

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

delay(500);

retries++;

Serial.print(".");

if (retries > 20) {

Serial.println("Failed to connect to WiFi.");

break;

}

}

if (WiFi.status() == WL\_CONNECTED) {

Serial.println("");

Serial.print("Connected to WiFi. IP: ");

Serial.println(WiFi.localIP());

} else {

Serial.println("WiFi connection failed.");

}

server.begin();

}

void loop() {

WiFiClient client = server.available();

if (!client) return;

while (!client.available()) {

delay(1);

}

String request = client.readStringUntil('\r');

client.flush();

if (request.indexOf("/ON") != -1) {

digitalWrite(pin, HIGH);

} else if (request.indexOf("/OFF") != -1) {

digitalWrite(pin, LOW);

}

client.print("HTTP/1.1 200 OK\r\nContent-Type: text/html\r\n\r\n");

client.print("<!DOCTYPE HTML><html>");

client.print("<head><title>LED Control</title></head>");

client.print("<body style='text-align:center;'>");

client.print("<h1>LED Control via NodeMCU</h1>");

client.print("<p><a href=\"/ON\"><button style='padding:10px 20px;'>Turn ON</button></a></p>");

client.print("<p><a href=\"/OFF\"><button style='padding:10px 20px;'>Turn OFF</button></a></p>");

client.print("</body></html>");

delay(1);

}