#include <ESP8266WebServer.h>

const char\* ssid = "HellbeE908";

const char\* password = "x9pgztch";

WiFiServer server(80);

// Pins for 8 IR obstacle sensors

const int irPins[] = {D0, D1, D2, D3, D4, D5, D6, D7};

const int numSensors = 8;

void setup() {

  Serial.begin(115200);

  // Connect to Wi-Fi network

  WiFi.begin(ssid, password);

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

    delay(500);

    Serial.print(".");

  }

  Serial.println("");

  Serial.println("WiFi connected.");

  Serial.println("IP address: ");

  Serial.println(WiFi.localIP());

  server.begin();

}

void loop() {

  WiFiClient client = server.available();

  if (client) {

    Serial.println("New Client.");

    String currentLine = "";

    while (client.connected()) {

      if (client.available()) {

        char c = client.read();

        Serial.write(c);

        if (c == '\n') {

          if (currentLine.length() == 0) {

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

            client.println("Content-type:text/html");

            client.println("Connection: close");

            client.println();

            client.println("<!DOCTYPE html><html>");

            client.println("<head><meta name=\"viewport\" content=\"width=device-width, initial-scale=1\">");

            client.println("<link rel=\"icon\" href=\"data:,\">");

            client.println("<style>");

            client.println("html { font-family: 'Arial', sans-serif; display: flex; justify-content: center; align-items: center; height: 100vh; background-color: #FFEBCD; }");

            client.println(".sensor-container { display: flex; flex-wrap: wrap; justify-content: center; gap: 20px; }");

            client.println(".sensor { width: 150px; height: 150px; display: flex; justify-content: center; align-items: center; font-size: 20px; border-radius: 20px; margin: 10px; padding: 20px; background-color: #fff; box-shadow: 0 0 10px rgba(0, 0, 0, 0.1); }");

            client.println(".sensor.high { background-color: #ff8080; }");

            client.println(".sensor.low { background-color: #80ff80; }");

            client.println("</style>");

            client.println("<meta http-equiv=\"refresh\" content=\"5\">"); // Auto-refresh every 5 seconds

            client.println("</head><body>");

            client.println("<h1 style=\"text-align: center;\">Parking Management System</h1>");

            client.println("<div class=\"sensor-container\">");

            // Display the data from 8 IR sensors with colored rectangles

            for (int i = 0; i < numSensors; i++) {

              int sensorValue = digitalRead(irPins[i]);

              client.print("<div class=\"sensor\" style=\"background-color:  ");

              client.print(sensorValue == HIGH ? "green" : "red");

              client.print("\">Slot ");

              client.print(i + 1);

              client.print(": ");

              client.print(sensorValue == HIGH ? "Vacant" : "Occupied");

              client.println("</div>");

            }

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

            client.println();

            break;

          } else {

            currentLine = "";

          }

        } else if (c != '\r') {

          currentLine += c;

        }

      }

    }

    client.stop();

    Serial.println("Client disconnected.");

    Serial.println("");

  }

}