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#include <WiFi.h> // library koneksi

// variabel sensor LDR
#define LDR_A_PIN 35
#define LDR_B_PIN 32
#define LDR_D_PIN 33

// variabel push button
#define BUTTON_PIN 14

// variabel LED
#define LED_A_PIN 25
#define LED_B_PIN 26
#define LED_D_PIN 27

#define LED_RED_PIN 16
#define LED_GREEN_PIN 17

// nilai kalibrasi nilai sensor LDR
int kalibrasi_a = 220;
int kalibrasi_b = 235;
int kalibrasi_d = 400;

// Konfigurasi WiFi
const char *ssid = "Redmi Note 10 Pro";
const char *password = "1sampai8";

// IP Address server
const char *host = "172.20.10.3";

void setup() {
    Serial.begin(9600);

    WiFi.mode(WIFI_STA);
    WiFi.begin(ssid, password);

    Serial.print("Menunggu koneksi");
    while (WiFi.status() != WL_CONNECTED) {
        delay(100);
        Serial.print(".");
    }

    Serial.println("");
    Serial.println("Koneksi berhasil");

    pinMode(LDR_A_PIN, INPUT);
    pinMode(LDR_B_PIN, INPUT);
    pinMode(LDR_D_PIN, INPUT);
}
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pinMode(LED_A_PIN, OUTPUT);
pinMode(LED_B_PIN, OUTPUT);
pinMode(LED_D_PIN, OUTPUT);

pinMode(BUTTON_PIN, INPUT_PULLUP);

digitalWrite(LED_A_PIN, HIGH);
digitalWrite(LED_B_PIN, HIGH);
digitalWrite(LED_D_PIN, HIGH);
}

void loop() {
    delay(10);
    int button = digitalRead(BUTTON_PIN);
    if (button == LOW) {
        int ldr_a = 0;
        int ldr_b = 0;
        int ldr_d = 0;

        for(int i=0; i<5; i++){
            delay(10);
            ldr_a += analogRead(LDR_A_PIN);
            delay(10);
            ldr_b += analogRead(LDR_B_PIN);
            delay(10);
            ldr_d += analogRead(LDR_D_PIN);

            delay(2000);
        }

        ldr_a = ldr_a/5;
        ldr_b = ldr_b/5;
        ldr_d = ldr_d/5;

        Serial.println("LDR A : " + String(ldr_a));
        Serial.println("LDR B : " + String(ldr_b));
        Serial.println("LDR D : " + String(ldr_d));
        Serial.println();

        String gol_darah;
        String rhesus;

        if (ldr_a <= kalibrasi_a) {
            if (ldr_b <= kalibrasi_b) {
                gol_darah = "AB";
            } else {
                gol_darah = "A";
            }
        }
    }
}

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    }
} else {
    if (ldr_b <= kalibrasi_b) {
        gol_darah = "B";
    } else {
        gol_darah = "0";
    }
}

if (ldr_d <= kalibrasi_d) {
    rhesus = "+";
} else {
    rhesus = "-";
}

Serial.println("Golongan Darah : " + gol_darah);
Serial.println("Rhesus : " + rhesus);
Serial.println();

 kirim(gol_darah, rhesus);
 delay(1000);
}
}

void kirim(String gol_darah, String rhesus){
    // mengirimkan ke alamat host dengan port 80
    WiFiClient client;
    const int httpPort = 80;

    // mencoba terkoneksi dengan host
    if (!client.connect(host, httpPort)) {
        Serial.println("Koneksi Gagal");
        digitalWrite(LED_RED_PIN, HIGH);
        delay(2000);
        digitalWrite(LED_RED_PIN, LOW);
        return;
    }

    if(rhesus == "+"){
        rhesus = "%2B";
    }else{
        rhesus = "%2D";
    }

    // alamat tujuan
    String url =
"/golongan_darah/simpan_data.php?gol="+gol_darah+"&rhesus="+rhesus;

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// mengirimkan request ke server
client.print("GET " + url + " HTTP/1.1\r\n" +
            "Host: " + host + "\r\n" +
            "Connection: close\r\n\r\n");

digitalWrite(LED_GREEN_PIN, HIGH);
delay(2000);
digitalWrite(LED_GREEN_PIN, LOW);

unsigned long timeout = millis();
while (client.available() == 0) {
    if (millis() - timeout > 1000) {
        Serial.println("client timeout !");
        client.stop();
        return;
    }
}

// membaca balasan dari server dan tampilkan di serial monitor
while (client.available()) {
    String line = client.readStringUntil('\r');
    Serial.print(line);
}

Serial.println("Selesai");
}
```