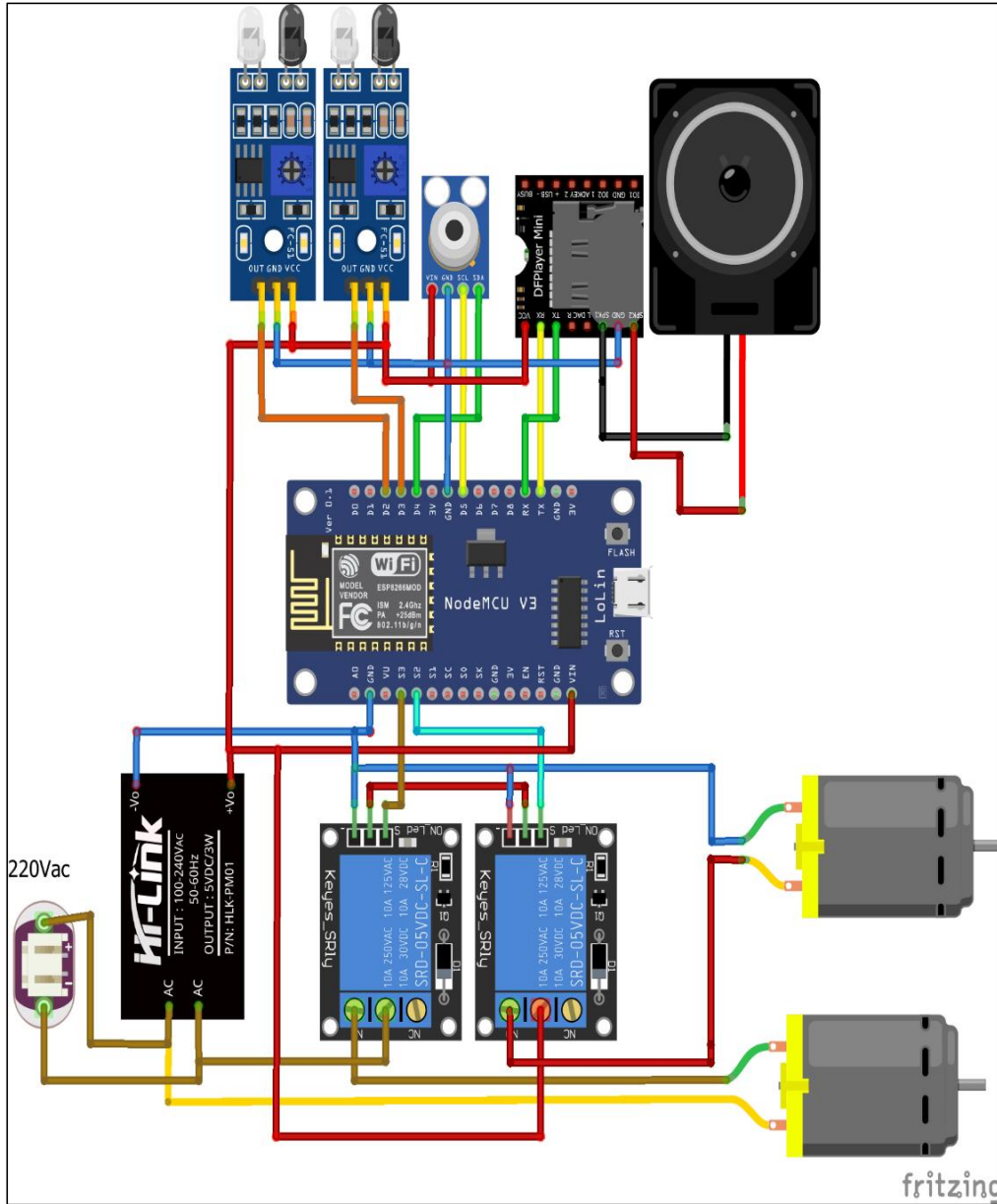


Lampiran 1

DIAGRAM RANGKAIAN SMARTIZER



lampiran 1 Gambar Diagram Rangkaian *Smartizer*

Lampiran 2

KODE PROGRAM DALAM SMARTIZER

```
#include <Wire.h>
#include <DFPlayer_Mini_Mp3.h>
#include <Adafruit_MLX90614.h>

#include <ESP8266WiFi.h>
#include <WiFiClient.h>
#include <ESP8266WebServer.h>
#include "index.h"
/*
=====
*/
ESP8266WebServer server(80);
const char* ssid = "SMARTIZER";
const char* password = "";

Adafruit_MLX90614 mlx = Adafruit_MLX90614();

int Relay = 2; //D4; // GPIO2
int busy = 16; //D0; // GPIO16
int irSensor1 = 14; //D5;
int irSensor2 = 12; //D6;
int sensorTandon = 13; //D7;

int dataSensor1 = 0;
int dataSensor2 = 0;
int dataSensor3 = 0;
int dataDesimal1 = 0;
int dataDesimal2 = 0;
/*=====
This routine is executed when you open its IP in browser
=====*/
void handleRoot() {
  server.send(200, "text/html", MAIN_page); //Send web
  page
}

void handleKeranAir() {
  byte a = digitalRead(Relay);
  if (a == LOW) {
    server.send(200, "text/plain", "BUKA");
    Serial.println("Keran Terbuka");
  }
  else if (a == HIGH) {
    server.send(200, "text/plain", "TUTUP");
    Serial.println("Keran Tertutup");
  }
}

void handleKeran() {
  String t_state = server.arg("tombol");
  Serial.println(t_state);
  if (t_state == "1") {
```

```

}
else {
    digitalWrite(Relay, HIGH);           //LED OFF
}
}

void handleSuhuObyek() {
    dataDesimal1 = mlx.readObjectTempC();
    dataDesimal2 = ((mlx.readObjectTempC() - dataDesimal1) * 10);
    char istr[16];
    sprintf(istr, "%d,%d ", dataDesimal1, dataDesimal2);
    server.send(200, "text/plain", istr);
    Serial.print("Suhu Obyek = ");
    Serial.println(istr);
}

void handleSuhuRuang() {
    dataDesimal1 = mlx.readAmbientTempC();
    dataDesimal2 = ((mlx.readAmbientTempC() - dataDesimal1) * 10);
    char istr[16];
    sprintf(istr, "%d,%d ", dataDesimal1, dataDesimal2);
    server.send(200, "text/plain", istr);
    Serial.print("Suhu Ruang = ");
    Serial.println(istr);
}

/*=====
   This routine is executed when you open its IP in browser
   =====*/
void setup () {
    mlx.begin();
    Serial.begin (9600);
    mp3_set_serial (Serial);

    WiFi.mode(WIFI_AP);
    WiFi.softAP(ssid, password);
    IPAddress myIP = WiFi.softAPIP();
    server.begin();

    server.on("/",          handleRoot);
    server.on("/setKeran",  handleKeran);
    server.on("/keranAir",  handleKeranAir);
    server.on("/suhuObyek", handleSuhuObyek);
    server.on("/suhuRuang", handleSuhuRuang);
    server.on("/tandonAir", handleTandon);

    pinMode      (Relay,      OUTPUT);
    digitalWrite (Relay,      HIGH);
    pinMode      (busy,       INPUT);
    pinMode      (irSensor1,  INPUT);
    pinMode      (irSensor2,  INPUT);
    pinMode      (sensorTandon, INPUT);
    digitalWrite (irSensor1,  HIGH);
    digitalWrite (irSensor2,  HIGH);

    delay(1000);
    /* ===== Display Starting Programs =====*/
    Serial.println();
}

```

```

Serial.print ("Acces Point: ");
Serial.println(ssid);
Serial.print ("IP address: ");
Serial.println(myIP);

mp3_set_volume (30);
mp3_play (1);
tunggubusy();

}

void loop () {
  server.handleClient();
  statusObyek();
  statusKeran();
  statusKeranaSabun();
}

void statusObyek() {
  if (digitalRead(irSensor1) == LOW) {
    digitalWrite (irSensor1, HIGH);
    delay (1000);
    if (digitalRead(irSensor1) == LOW) {
      digitalWrite (irSensor1, HIGH);

      mp3_set_volume (30);
      delay (50);
      mp3_play (2);
      delay (500);

      dataSensor1 = mlx.readObjectTempC();
      dataSensor2 = ((mlx.readObjectTempC() - dataSensor1) * 10);
      Serial.println (dataSensor1);

      switch (dataSensor1) {
        case 32:
          mp3_play (32);
          Serial.println ("Suhu Anda 32");
          komaAngka();
          break;
        case 33:
          mp3_play (33);
          Serial.println ("Suhu Anda 33");
          komaAngka();
          break;
        case 34:
          mp3_play (34);
          Serial.println ("Suhu Anda 34");
          komaAngka();
          break;
        case 35:
          mp3_play (35);
          Serial.println ("Suhu Anda 35");
          komaAngka();
          break;
        case 36:
          mp3_play (36);
          Serial.println ("Suhu Anda 36");
          komaAngka();

```

```

break;
    case 37:
        mp3_play (37);
        Serial.println ("Suhu Anda 37");
        komaAngka();
        break;
    case 38:
        mp3_play (38);
        Serial.println ("Suhu Anda 38");
        periksaDokter();
        break;
    case 39:
        mp3_play (39);
        Serial.println ("Suhu Anda 39");
        periksaDokter();
        break;
    case 40:
        mp3_play (40);
        Serial.println ("Suhu Anda 40");
        periksaDokter();
        break;
    case 41:
        mp3_play (41);
        Serial.println ("Suhu Anda 41");
        periksaDokter();
        break;
    case 42:
        mp3_play (42);
        Serial.println ("Suhu Anda 42");
        periksaDokter();
        break;
    default:
        mp3_play (30);
        Serial.println ("diluar jangkauan suhu tubuh manusia");
        break;
}
    tunggubusy();
}
}

void periksaDokter() {
    komaAngka();
    tunggubusy();
    mp3_play (31);
    Serial.println ("Segera Periksa ke Dokter");
}

void komaAngka() {
    tunggubusy();
    switch (dataSensor2) {
        case 0:
            mp3_play (20);
            Serial.println ("Koma 0 Derajat Celcius");
            break;
        case 1:
            mp3_play (21);

```

```

Serial.println ("Koma 1 Derajat Celcius");
    break;
case 2:
    mp3_play (22);
    Serial.println ("Koma 2 Derajat Celcius");
    break;
case 3:
    mp3_play (23);
    Serial.println ("Koma 3 Derajat Celcius");
    break;
case 4:
    mp3_play (24);
    Serial.println ("Koma 4 Derajat Celcius");
    break;
case 5:
    mp3_play (25);
    Serial.println ("Koma 5 Derajat Celcius");
    break;
case 6:
    mp3_play (26);
    Serial.println ("Koma 6 Derajat Celcius");
    break;
case 7:
    mp3_play (27);
    Serial.println ("Koma 7 Derajat Celcius");
    break;
case 8:
    mp3_play (28);
    Serial.println ("Koma 8 Derajat Celcius");
    break;
case 9:
    mp3_play (29);
    Serial.println ("Koma 9 Derajat Celcius");
    break;
default:
    mp3_play (19);
    Serial.println ("Derajat Celcius");
    break;
}
}

void statusKeran() {
    if (digitalRead(irSensor2) == LOW) {
        digitalWrite (irSensor2, HIGH);
        delay (500);
        if (digitalRead(irSensor2) == LOW) {
            digitalWrite (irSensor2, HIGH);
            mp3_play (5);
            digitalWrite (Relay, LOW);
            Serial.println ("Cuci tangan dengan benar, pakai sabun biar
bersih");
            delay (5000);
            while (digitalRead(irSensor2) == LOW) {
                server.handleClient();
            }
            digitalWrite (irSensor2, HIGH);
            digitalWrite (Relay, HIGH);
            Serial.println ("Terimakasih");
        }
    }
}

```

```

        mp3_play (6);
        delay (100);
    }
}

void statusKeranSabun() {
    if (digitalRead(irSensor2) == LOW) {
        digitalWrite (irSensor2, HIGH);
        delay (500);
        if (digitalRead(irSensor2) == LOW) {
            digitalWrite (irSensor2, HIGH);
            mp3_play (5);
            digitalWrite (Relay, LOW);
            Serial.println ("Cuci tangan dengan benar, pakai sabun biar
bersih");
            delay (5000);
            while (digitalRead(irSensor2) == LOW) {
                server.handleClient();
            }
            digitalWrite (irSensor2, HIGH);
            digitalWrite (Relay, HIGH);
            Serial.println ("Terimakasih");
            mp3_play (6);
            delay (100);
        }
    }
}

void tunggubusy() {
    delay(500);
    while (digitalRead(busy) == LOW) {
        server.handleClient();
    }
}

```

Lampiran 3

DOKUMENTASI FOTO SMARTIZER SAAT PENGUJIAN



lampiran 3 Gambar Pengujian Smartizer



lampiran 4 Gambar Pengujian Smartizer