

LAMPIRAN

Lampiran 1. Data suhu dan kelembapan

Waktu	Kelembapan	Suhu
11/15/2023 0:00	83.86	27.97
11/16/2023 0:00	85.91	28.22
11/17/2023 0:00	83.31	28.17
11/18/2023 0:00	82.47	28.32
11/19/2023 0:00	83.78	28.08
11/20/2023 0:00	85.26	28.01
11/21/2023 0:00	86.19	28.32
11/22/2023 0:00	87.16	29.02
11/23/2023 0:00	86.78	28.88
11/24/2023 0:00	83.19	28.43
11/25/2023 0:00	82.98	27.01
11/26/2023 0:00	83.26	27.72
11/27/2023 0:00	83.24	27.39
11/28/2023 0:00	82.36	27.4
11/29/2023 0:00	83.8	27.99
11/30/2023 0:00	82.87	28.07
12/1/2023 0:00	83.27	28.02
12/2/2023 0:00	83.65	28.31
12/3/2023 0:00	83.71	27.95
12/4/2023 0:00	83.64	27.74
12/5/2023 0:00	85.69	27.86
12/6/2023 0:00	85.38	28.72
12/7/2023 0:00	81.23	28.33
12/8/2023 0:00	86.56	28.64
12/9/2023 0:00	83.1	28.54
12/10/2023 0:00	83.97	28.31
12/11/2023 0:00	85.5	28.27
12/12/2023 0:00	85.4	28.72
12/13/2023 0:00	85.77	28.49

Lampiran 2. Kode Program

```

#define BLYNK_TEMPLATE_ID "TMPL66hgotw5G"
#define BLYNK_TEMPLATE_NAME "MKWalet"
#define BLYNK_AUTH_TOKEN
"NH0gWwXOU sazPviewQpNZPRyL819BGHg"

#include <Wire.h>
#include <Adafruit_Sensor.h>
#include <Adafruit_BME280.h>
#include <LiquidCrystal_I2C.h>
#include <Wifi.h>
#include <WifiClient.h>
#include <BlynkSimpleEsp32.h>

Adafruit_BME280 bme; // I2C
LiquidCrystal_I2C lcd(0x27, 16, 2); // Inisialisasi objek LCD dengan alamat I2C
0x27, 16 karakter per baris, 2 baris
const int relayPin = 2; // Pin untuk mengendalikan relay

// Informasi jaringan Wifi
char ssid[] = "WALET_plus";
char pass[] = "0209040406";

// Informasi otentikasi Blynk
char auth[] = "NH0gWwXOU sazPviewQpNZPRyL819BGHg";

bool notifMistmaker_On = false;
bool notifMistmaker_Off = false;

// manual control=====
bool manualControlActive = false; // Menyimpan status manual control

BLYNK_WRITE(V2) {
  int value = param.asInt();
  if (value == 1) {
    digitalWrite(relayPin, HIGH); // Mengaktifkan relay
    Blynk.virtualWrite(V2, HIGH); // Perbarui status LED di Blynk menjadi ON
    // Kirim notifikasi ke Blynk
    if (notifMistmaker_On == false){
      Blynk.logEvent("mistmaker_on");
      notifMistmaker_On == true;
      notifMistmaker_Off = false;
    }
    manualControlActive = true; // Aktifkan mode manual control
  } else {
    digitalWrite(relayPin, LOW); // Mematikan relay
    Blynk.virtualWrite(V2, LOW); // Perbarui status LED di Blynk menjadi OFF
    // Kirim notifikasi ke Blynk
  }
}

```

```

    if (notifMistmaker_Off == false){
        Blynk.logEvent("mistmaker_off");
        notifMistmaker_Off == true;
        notifMistmaker_On = false;
    }
    manualControlActive = true; // Aktifkan mode manual control
}
}
// manual control=====

void setup() {
    Serial.begin(115200);
    //Serial.println(F("BME280 test"));

    bool status;
    // Default settings
    status = bme.begin(0x76);
    if (!status) {
        Serial.println("Could not find a valid BME280 sensor, check wiring!");
        while (1);
    }
    pinMode(relayPin, OUTPUT); // Mengatur pin relay sebagai output
    digitalWrite(relayPin, LOW); // Matikan relay saat awalnya
    lcd.init();                // Inisialisasi LCD
    lcd.backlight();           // Nyalakan backlight
    lcd.setCursor(0, 0);
    lcd.print("Temp. :");
    lcd.setCursor(0, 1);
    lcd.print("Hum. :");
    //delay(2000);

    // Menghubungkan ke jaringan Wifi
    Wifi.begin(ssid, pass);
    while (Wifi.status() != WL_CONNECTED) {
        delay(1000);
        Serial.println("Connecting to Wifi...");
    }
    Serial.println("Connected to Wifi");

    // Menghubungkan ke Blynk
    Blynk.begin(auth, ssid, pass);
}

void loop() {

    Blynk.run();

    float temperatureNative = bme.readTemperature();

```

```

float humidityNative = bme.readHumidity();
float temperature = temperatureNative - 2.137;
float humidity = humidityNative + 9.429;

// Kirim data suhu dan kelembapan ke widget Blynk
Blynk.virtualWrite(V0, temperature);
Blynk.virtualWrite(V1, humidity);

lcd.setCursor(9, 0);
lcd.print(temperature);
lcd.print(" C");

lcd.setCursor(9, 1);
lcd.print(humidity);
lcd.print(" %");

lcd.clear();
lcd.setCursor(0, 0);
lcd.print("Temp. :");
lcd.setCursor(0, 1);
lcd.print("Hum. :");
lcd.setCursor(9, 0); // Pindahkan kursor ke posisi yang sesuai untuk suhu
lcd.print(temperature);
lcd.print(" C");
lcd.setCursor(9, 1); // Pindahkan kursor ke posisi yang sesuai untuk kelembapan
lcd.print(humidity);
lcd.print(" %");

// delay 15 detik setelah kontrol manual
if (manualControlActive == true){
  delay(15000);
  manualControlActive == false;
}

// cek suhu dan kelembapan
if (humidity < 80.0 || temperature > 29.0) {
  //if (humidity < 80){
    digitalWrite(relayPin, HIGH);
    Blynk.virtualWrite(V2, HIGH); // Perbarui status di Blynk menjadi ON
    // Kirim notifikasi ke Blynk
    if (notifMistmaker_On == false){
      Blynk.logEvent("mistmaker_on");
      notifMistmaker_On = true;
      notifMistmaker_Off = false;
    }
  } else if (humidity > 90.0 || temperature < 26.0){
    //else if (humidity > 90){
      digitalWrite(relayPin, LOW);

```

```
Blynk.virtualWrite(V2, LOW); // Perbarui status di Blynk menjadi OFF  
// Kirim notifikasi ke Blynk  
if (notifMistmaker_Off == false){  
  Blynk.logEvent("mistmaker_off");  
  notifMistmaker_Off = true;  
  notifMistmaker_On = false;  
}  
}  
delay(5000);  
}
```

Lampiran 3. Pengujian sensor BME280

