LAMPIRAN
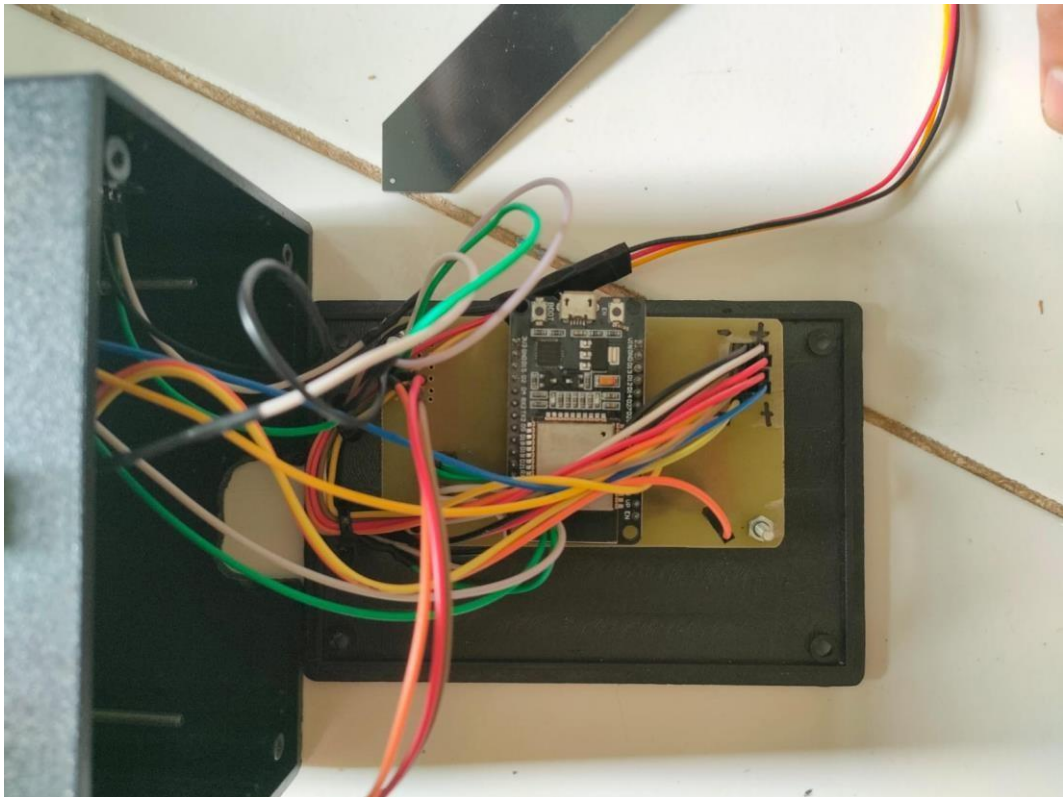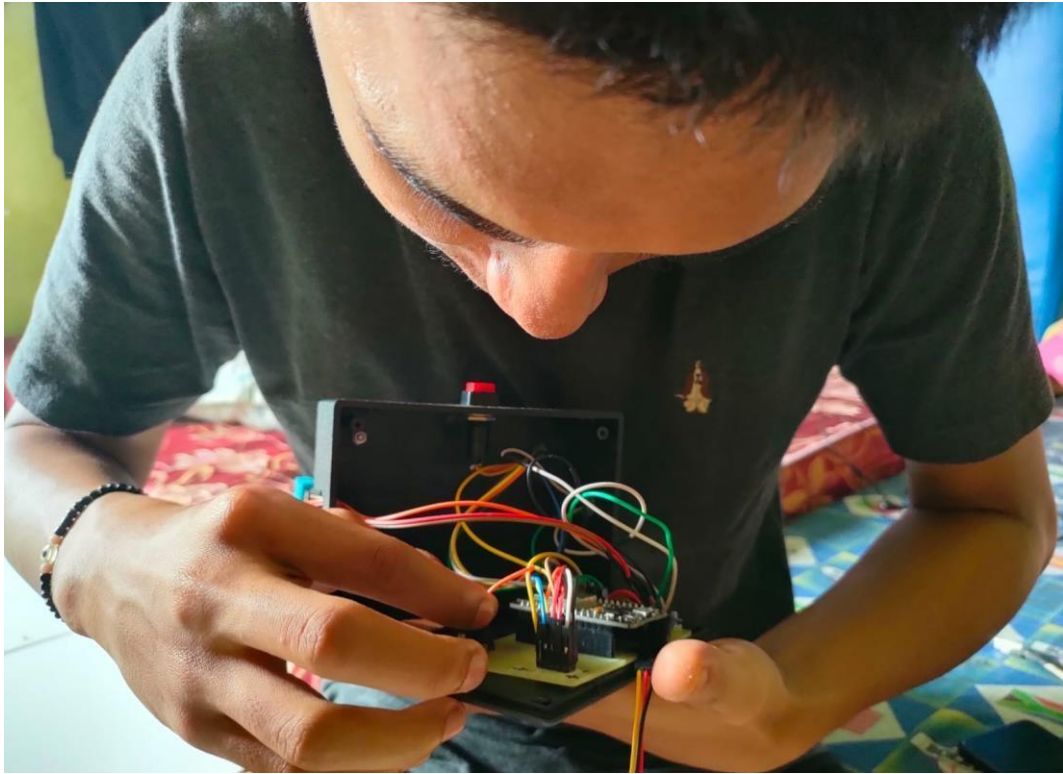
```
#include <WiFi.h>
#include <Adafruit_Sensor.h>
#include <Adafruit_BME280.h>
#include <DHT.h>
#include <ThingSpeak.h>
#include <LiquidCrystal_I2C.h>

// set the LCD number of columns and rows
int lcdColumns = 20;
int lcdRows =4;

// set LCD address, number of columns and rows
// if you don't know your display address, run an I2C scanner sketch
LiquidCrystal_I2C lcd(0x27, lcdColumns, lcdRows);
#define DHTPIN 26
#define DHTTYPE DHT11

const char* ssid = "Repi";
const char* password = "repijelek";
const char* writeAPIKey = "QD2AW8ZSCBPHTJ1N";
WiFiClient client;

int myChannelNumber = 2241287;
int SoilmoisturePin = 33;
int SoilmoistureValue;
int SoilmoisturePercent;

DHT dht(DHTPIN, DHTTYPE);
Adafruit_BME280 bme;

// Inisialisasi koneksi WiFi
```

```arduino
void setupWiFi() {
  WiFi.begin(ssid, password);
  Serial.print("Connecting to WiFi");
  while (WiFi.status() != WL_CONNECTED) {
    delay(1000);
    Serial.print(".");
  }
  Serial.println();
}

void setup() {

   // initialize LCD
  lcd.init();
  // turn on LCD backlight
  lcd.backlight();
  dht.begin();
  Serial.begin(115200);
  setupWiFi();
  ThingSpeak.begin(client);
  bme.begin(0x76);
  lcd.setCursor(0, 0);
  // print message
  lcd.print(" M.M ARZAQ ");
   lcd.setCursor(0, 1);
  // print message
  lcd.print(" ELEKTRONIKA ");
   lcd.setCursor(0, 2);
  // print message
  lcd.print(" 2023 ");
  lcd.clear();
```

```arduino
}

void loop() {
  float temp = dht.readTemperature();
  float humidity = dht.readHumidity();

  Serial.print("Temp: ");
  Serial.print(temp);
  Serial.print(" C ");
  lcd.setCursor(0, 0);
  lcd.print("    M.M ARZAQ ");

  lcd.setCursor(0, 1);
  lcd.print("Temp: ");
  lcd.print(temp);
  Serial.print("Humidity: ");
  Serial.print(humidity);
  Serial.println(" % ");
  lcd.setCursor(0, 2);
  lcd.print("Humidity: ");
  lcd.print(humidity);
  SoilmoistureValue = analogRead(SoilmoisturePin);
  SoilmoisturePercent = map(SoilmoistureValue, 4095, 0, 0, 100); // Ubah nilai
soil moisture menjadi persentase // Pembacaan dibalik pada 0 map diset ke 100
dan nilai 100 diset ke 0

  Serial.print("Soil Moisture: ");
  Serial.print(SoilmoisturePercent);
  Serial.println("%");
  lcd.setCursor(0,  3);
  lcd.print("Soil Moisture: ");
```

```
  lcd.print(SoilmoisturePercent);
  lcd.print("%");



  // Kirim data ke ThingSpeak
ThingSpeak.writeField(myChannelNumber, 1, temp, writeAPIKey);
ThingSpeak.writeField(myChannelNumber, 2, humidity, writeAPIKey);
ThingSpeak.writeField(myChannelNumber, 3, SoilmoisturePercent,
writeAPIKey);
  ThingSpeak.writeField(myChannelNumber, 4, bme.readTemperature(),
writeAPIKey);
  ThingSpeak.writeField(myChannelNumber, 5, bme.readPressure() / 100.0F,
writeAPIKey);
  ThingSpeak.writeField(myChannelNumber, 6, bme.readHumidity(),
writeAPIKey);

  delay(5000);
}
```