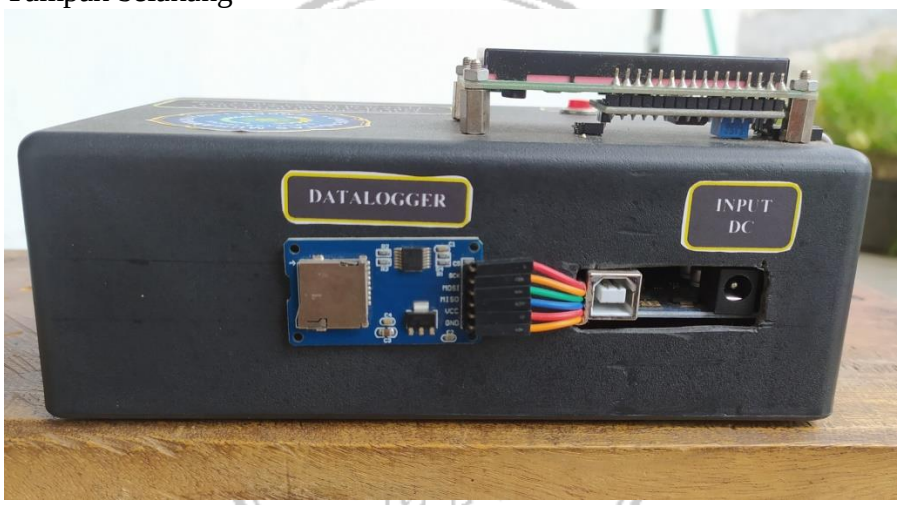
LAMPIRAN

Lampiran 1 Desain Alat Pengambil Data Tegangan

- Tampak depan

- Tampak belakang



- Tampak atas

Lampiran 2 Source Code Alat Pengambilan Data Tegangan

```
#include "Wire.h"
#include <LiquidCrystal_I2C.h>
#include <SD.h>
#include <SPI.h>
#include <DS3231.h>

LiquidCrystal_I2C lcd(0x27, 16, 2);
int pin = A0;
int bt = 7;
int btx;
int adcsensor;
float Tegangan;
File myFile;
DS3231  rtc(SDA, SCL);
int pinCS = 10; // Pin 10 on Arduino Uno

void setup(){
lcd.begin();
lcd.clear();
lcd.noCursor();
Serial.begin(9600);
pinMode(pinCS, OUTPUT);
pinMode(pin, INPUT);
pinMode(bt,INPUT_PULLUP);
Serial.begin(9600);
lcd.setCursor(0,0);
lcd.print("DWI KEMAL");
lcd.setCursor(0,1);
lcd.print("DETEKSI AKTIF");
delay(2000);
lcd.clear();

if (SD.begin())
  {
    Serial.println("SD card is ready to
use.");
    lcd.setCursor(0,0);
    lcd.print("SD READY");
    delay(1000);
    lcd.setCursor(0,1);
    lcd.print("Tekan Mulai");
  } else
  {
```

```
Serial.println("SD card initialization failed");
    lcd.setCursor(0,0);
    lcd.print("SD FAILED");
    delay(2000);
    lcd.setCursor(0,1);
    lcd.print("cek SD");
    return;
  }
  rtc.begin();
}

void loop(){
 btx = digitalRead(bt);
 if(btx == 0){
int i;
int sampling = 3000/100;
//pemasangan delay 1 detik=1000 ms>>> 1000x0,1ms
 lcd.clear();
 lcd.setCursor(0,0);
 lcd.print("PROSES");
 Serial.println(" ");
 Serial.print(" deteksi>>");
 Serial.print(rtc.getDateStr());
 Serial.print("/");
 Serial.println(rtc.getTimeStr());
 myFile = SD.open("test.txt", FILE_WRITE);
 myFile.println(" ");
 myFile.print(" deteksi>>");
 myFile.print(rtc.getDateStr());
 myFile.print("/");
 myFile.println(rtc.getTimeStr());
 myFile.close();

  for (i=0;i<sampling;i++){

   int adcsensor = analogRead(A0);
   adcsensor,DEC;
 Tegangan = adcsensor * (5.0 / 1023.0);
  Serial.print(rtc.getTimeStr());
  Serial.print("//");
  Serial.print("tegangan= ");
  Serial.print(Tegangan);
  Serial.print(" Volt");
  Serial.print("//");
  Serial.println(adcsensor);
```

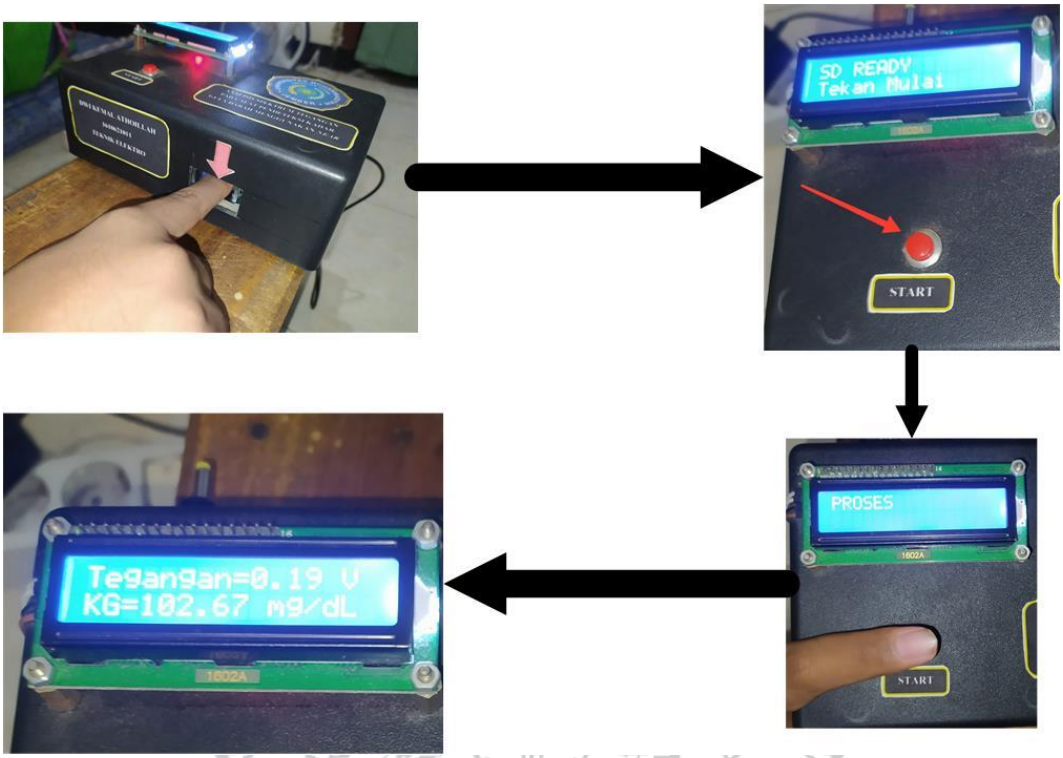
```
 myFile = SD.open("test.txt", FILE_WRITE);
  if (myFile) {
    myFile.print(Tegangan); //DATA SENSOR
    myFile.print(">> ");
    myFile.println(adcsensor);
    myFile.close(); // close the file
  }
  delay(100);// delay looping
}
  Serial.print("kadar gula= ");
  Serial.println(" mg/dl");
  myFile = SD.open("test.txt", FILE_WRITE);
  myFile.print("kadar gula= ");
  myFile.println(" mg/dl");

  myFile.close(); // close the file
  return;
  }

 }
```

Lampiran 3 Dokumentasi Pengambilan Data

Lampiran 4 Prosedur Penggunaan Alat



Prosedur penggunaan alat deteksi kadar gula darah *non-invasive:*

1. Masukkan jari tangan pasien yang akan diukur kadar gula darahnya pada lubang yang telah disediakan pada alat deteksi kadar gula darah *non-invasive.*
2. Jika sudah tekan tombol start pada alat deteksi kadar gula darah *non-invasive* untuk memulai pendeteksi kadar gula darah.
3. Pada layar LDC akan tampil tulisan “PROSES” ini menunjukkan bahwa alat sedang mendeteksi kadar gula darah pasien.
4. Terakhir LCD akan menampilkan nilai tegangan dan nilai kadar gula darah pasien yang sedang diukur.