LAMPIRAN

Program Arduino Uno ATMega328

#include <Wire.h>//inisialisasi library pada arduino

#include <LiquidCrystal_I2C.h>

LiquidCrystal_I2C lcd(0x27,16,2);

int in = 5; // definisi varibel in dengan tipe data int dengan nilai awal 5

int out = 10; // definisi varibel out dengan tipe data int dengan nilai awal 10

int kondisi = 0;// definisi varibel kondisi dengan tipe data int dengan nilai awal 0

int A = 0;// definisi varibel A dengan tipe data int dengan nilai awal 0

int T = 0;// definisi varibel T dengan tipe data int dengan nilai awal 0

int x;

int i;

float v;

```
float tek;

int kpa;

int mmhg;




void setup() { // pembacaan program secara sekali jalan


  lcd.begin(16,2);   //Unntuk setting lcd sperti menyalakan lcd

  lcd.init();

  lcd.backlight();

  delay(250);

  lcd.noBacklight();

  delay(250);

  lcd.backlight();


  pinMode (out,OUTPUT);//setting pin output puhs button
```

```
pinMode (in, INPUT_PULLUP);// setting pin input push button

pinMode(2, INPUT_PULLUP);// setting pin input untuk Switch-300mmhg

pinMode(4, INPUT_PULLUP);// setting pin input untuk switch -400mmhg


}


void loop() {



digitalWrite (in, HIGH);

kondisi = digitalRead(in);



if (kondisi == LOW)

{

T++;

 delay(500);

 A = T;
```

```
if (A == 1)

  {

      digitalWrite (out, HIGH);//output logika 1

  }

  if (A == 2)

  {

      digitalWrite (out, LOW);//output logika 0

    delay(1000);

    T=0;

    A=0;

}

i=0;

}

if (digitalRead(2) == HIGH) {
```

```
lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Manual");

lcd.setCursor(0, 1);

lcd.print("mmHg= ");

lcd.print("  ");

lcd.print(mmhg);

lcd.print(" ");}

if (digitalRead(4) == HIGH) {

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Manual");

lcd.setCursor(0, 1);

lcd.print("mmHg= ");

lcd.print(" ");

lcd.print(mmhg);

lcd.print("  ");}
```

```
if (digitalRead(2) == LOW) {

  lcd.clear();

  lcd.setCursor(0, 0);

  lcd.print("-350 mmHg");

  lcd.setCursor(0, 1);

  lcd.print("mmHg= ");

  lcd.print(" ");

  lcd.print(mmhg);

  lcd.print("  ");

if (mmhg<=-295){

  digitalWrite (out, LOW);//output logika 0

    delay(1000);


    T=0;

    A=0;

  }}

  if (digitalRead(4)==LOW) {
```

```
    lcd.clear();

    lcd.setCursor(0, 0);

    lcd.print("-450 mmHg");

    lcd.setCursor(0, 1);

    lcd.print("mmHg= ");

    lcd.print(mmhg);

if (mmhg<=-395){

  digitalWrite (out, LOW);//output logika 0

    delay(1000);



    T=0;

    A=0;

  }

  }

pressure();


}
```

```
void pressure()

{

tek=0;

 for (i=0;i<800;i++)

 {


  x = analogRead(A0);

  v = x*(5/1023.0);

  tek = tek+v;

 }

 tek=tek/800;

 mmhg = ((tek/5.03)-0.92)*(7.5/0.007652);

 mmhg = mmhg-10;


 if (mmhg >-10)
```

```
  {

    mmhg = 0;

   //lcd.clear();

  }

delay(300);

}




// v =(float)(Dataadc*5.0)/1023.0

//   kpa = (float)((v / 5)-0.04)/0.0012858

 // Psi = (float)(kpa * 0.145)

  //mmhg = (float)(kpa * 7.5)
```

Rangkaian Keseluruhan