LAMPIRAN

Program

```
#include <Wire.h>  // i2C Conection Library

#include <LiquidCrystal_I2C.h>  //i2C LCD Library

#include <PWM.h>

//LiquidCrystal_I2C lcd(0x27, 16, 2);

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//use pin 11 on the Mega instead, otherwise there is a
frequency cap at 31 Hz

int pwmpin = 9;                    // the pin that the LED
is attached to

int duty = 125;        // duty cycle

int frek = 1;

int frekuensi1 = 1;

int frekuensi2 = 1;

int frekuensi3 = 1;

int frekuensi4 = 1;

int frekuensi5 = 1;

int simpanfrek1;

int simpanfrek2;

int simpanfrek3;

int simpanfrek4;

int simpanfrek5;

int btup = 2;

int btdown = 3;

int btok = 4;

int btrun = 5;
```

```
int btupx = 0;

int btdownx = 0;

int btokx = 0;

int btrunx = 0;

void setup() {

  lcd.begin();

  lcd.clear();

  lcd.noCursor();

  pinMode(btup,INPUT_PULLUP);

  pinMode(btdown,INPUT_PULLUP);

  pinMode(btok,INPUT_PULLUP);

  pinMode(btrun,INPUT_PULLUP);

  setting1();

  setting2();

  setting3();

  setting4();

  setting5();

}

void loop(){

lcd.setCursor(0, 0);

lcd.print("TEKAN RUN");

btrunx = digitalRead(btrun);

if(btrunx == 0){

  delay(1000);

  lcd.clear();
```

```
 mulai1();
  mulai2();
  mulai3();
  mulai4();
  mulai5();
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("SELESAI");
}
}
void mulai1(){
  lcd.setCursor(0, 0);
  lcd.print("START FREK 1");
  lcd.setCursor(0, 1);
  lcd.print(simpanfrek1);

  int32_t frequency1 = simpanfrek1; //frequency (in Hz)
  InitTimersSafe();
  bool success = SetPinFrequencySafe(pwmpin, frequency1);
  pwmWrite(pwmpin, duty);
  delay(10000);

  frequency1 = 0; //frequency (in Hz)
  InitTimersSafe();
  //  bool success = SetPinFrequencySafe(pwmpin, 0);

}
```

```
void setting1(){
lcd.setCursor(0, 0);
lcd.print("Pilih Frek 1 ");
lcd.setCursor(0, 1);
lcd.print(frekuensi1);
lcd.print("        ");
btupx = digitalRead(btup);
btdownx = digitalRead(btdown);
btokx = digitalRead(btok);
if(btupx == 0){
delay(200);
frekuensi1++;}
if(btdownx == 0){
delay(200);
frekuensi1--;}
if(frekuensi1 > 30){
frekuensi1 = 30;}
if(frekuensi1 < 1){
frekuensi1 = 1;}
if(btokx == 0){
simpanfrek1 = frekuensi1;
lcd.clear();
delay(1000);
return;
```

2) Rangkaian Keseluruhan