```
/*****************************************************
This program was produced by the
CodeWizardAVR V2.05.3 Standard
Automatic Program Generator
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Project :
Version :
Date    : 5/28/2017
Author  : User
Company :
Comments:


Chip type           : ATmega8
Program type        : Application
AVR Core Clock frequency: 12.000000 MHz
Memory model        : Small
External RAM size   : 0
Data Stack size     : 256
*****************************************************/

#include <mega8.h>//library atmega 8
#include <stdio.h>//
#include <delay.h>//libary delay
#include <alcd.h>//libarylcd
#define up    PINB.5//deklarasi PINB.5 sebagai up
```

```
#define right PINB.3
#define ok    PINB.4
#define heater PORTB.2
unsigned char buf[33],loop=0;//data yang diterimadarikarakterlcd,tipe data untukwaktu(loop)
intsmenit;//tipe data smenit
unsigned char detik,count,fan=0,lm35,menu,data1,setmenit=0,menit,setfan=0,fanlevel=0,detikbpm=0;



interrupt [TIM2_OVF] void timer2_ovf_isr(void)
{
TCNT2=0x8A;
loop++;
if (loop>=100)
   {
detik--;
detikbpm++;
loop=0;
}}
//program 1 detik

#define ADC_VREF_TYPE 0x00
unsignedintread_adc(unsigned char adc_input)
{
ADMUX=adc_input | (ADC_VREF_TYPE & 0xff);
delay_us(10);
ADCSRA|=0x40;
while ((ADCSRA & 0x10)==0);
```

```
ADCSRA|=0x10;
return ADCW;
}
//konfigurasiadc

voidsuhu()//fungsisuhu

{
    data1=read_adc(0);
    lm35=(float)data1*500/1023;
    //rumusmerubahnilaiadcmenjaditemperatur
lcd_gotoxy(8,0);
sprintf(buf,"SHU:%d ",lm35);
lcd_puts(buf);
lcd_gotoxy(14,0);
lcd_putchar(0xdf);//menampilkanderajat
lcd_putsf("C") ;
}


voidkipas()
  {
switch(setfan)
  {
case 0 : fanlevel=1;fan=125;break;
case 1 : fanlevel=2;fan=200;break;
case 2 : fanlevel=3;fan=255;break;
  }
```

```
lcd_gotoxy(0,1);
sprintf(buf,"Fan :%d",fanlevel);
lcd_puts(buf);
if(!up)  {setfan=setfan+1;}

if(setfan==3 ){setfan=0;}

delay_ms(100);

}



void time()
{

switch(setmenit)
   {
case 0 : menit=15;break;
case 1 : menit=20;break;
case 2 : menit=25;break;
case 3 : menit=30;break;
   }

lcd_gotoxy(0,1);
smenit=menit-1;
sprintf(buf,"Time:%d",menit);
lcd_puts(buf);
```

```
if(!up  ){setmenit=setmenit+1;}
if(setmenit==4) {setmenit=0;}
delay_ms(100);

}


void run()
{
lcd_clear();
detik=59;
time();
kipas();

while(1){

if(lm35<=35){heater=1;}
if(lm35>=50){heater=0;}
   OCR1A=fan;
suhu();

lcd_gotoxy(15,1);
sprintf(buf,"%d ",detikbpm);
lcd_puts(buf);


lcd_gotoxy(0,0);
sprintf(buf,"BPM:%d ",count);
```

```
lcd_puts(buf);

if(detikbpm==20){
count=TCNT0*3;
      if(detikbpm>=20){PORTC.4=1;delay_ms(500);lcd_clear();detikbpm=0;TCNT0=0;PORTC.4=0;}}

if(count<60)             {PORTC.1=1;PORTC.2=0;PORTC.3=0;}
if(count>=60 && count<=100){PORTC.1=0;PORTC.2=1;PORTC.3=0;}
if(count>100)            {PORTC.1=0;PORTC.2=0;PORTC.3=1;}

lcd_gotoxy(0,1);
sprintf(buf," %d:%d  ",smenit,detik);
lcd_puts(buf);
if(detik==0){smenit=smenit-1;detik=59;}
if(smenit<0 &&detik<=59){PORTC.4=1;delay_ms(1000);PORTC.4=0;break;}
   }
}



void main(void)
{
PORTB=0xF8;
DDRB=0x07;
PORTC=0x00;
DDRC=0x1E;
PORTD=0x10;
DDRD=0x00;
TCCR0=0x06;
```

```
TCNT0=0x00;
TCCR1A=0xA1;
TCCR1B=0x03;
TCNT1H=0x00;
TCNT1L=0x00;
ICR1H=0x00;
ICR1L=0x00;
OCR1AH=0x02;
OCR1AL=0xFF;
OCR1BH=0x00;
OCR1BL=0x00;
ASSR=0x00;
TCCR2=0x07;
TCNT2=0x8A;
OCR2=0x00;
MCUCR=0x00;
TIMSK=0x40;
UCSRB=0x00;
ACSR=0x80;
SFIOR=0x00;
ADMUX=ADC_VREF_TYPE & 0xff;
ADCSRA=0x84;
SPCR=0x00;
TWCR=0x00;
lcd_init(16);
#asm("sei")

while (1)
```

```
    {

heater=0;
lcd_gotoxy(14,1);
sprintf(buf,"%d ",detikbpm);
lcd_puts(buf);



lcd_gotoxy(0,0);
sprintf(buf,"BPM:%d ",count);
lcd_puts(buf);

lcd_gotoxy(0,1);
if(detikbpm==20){
count=TCNT0*3;
      if(detikbpm>=20){PORTC.4=1;delay_ms(250);lcd_clear();detikbpm=0;TCNT0=0;PORTC.4=0;}}


     OCR1A=0;//mematian motor
suhu();//memanggilfungsi

switch(menu)
     {
case 0 : kipas();break;
case 1 : time();break;
     }
delay_ms(100);
if(!right){lcd_clear();menu=menu+1;}
```

```
if(menu==2 ){menu=0;}
if(menu==-1){menu=2;}

if(!ok){run();}

if(count<60)              {PORTC.1=1;PORTC.2=0;PORTC.3=0;}
if(count>=60 && count<=100){PORTC.1=0;PORTC.2=1;PORTC.3=0;}
if(count>100)             {PORTC.1=0;PORTC.2=0;PORTC.3=1;}

 //tampil led
 }
}
```