

LAMPIRAN A

Program pada CodeVisionAVR

A-1

```

#include <mega16.h>
#include <delay.h>
// Declare your global variables here
//=====//
/**===== Inisialisasi Output =====**//
//=====//
#define servo PORTC.0 // Motor servo
#define led1 PORTC.1 // Led di Lantai 1
#define led2 PORTC.2 // Led di Lantai 2
#define led3 PORTC.3 // Led di Lantai 3
#define led4 PORTC.4 // Led di Lantai 4
#define led5 PORTC.5 // Led di Lantai 5
//+++++//
//=====//
/**===== Inisialisasi Sensor =====**//
//=====//
#define mgt1 PINB.2 //magnet di Lantai 1
#define mgt2 PINB.3 //magnet di Lantai 2
#define mgt3 PINB.4 //magnet di Lantai 3
#define mgt4 PINB.5 //magnet di Lantai 4
#define mgt5 PINB.6 //magnet di Lantai 5
//+++++//
//=====//
/**===== Inisialisasi Tombol =====**//
//=====//
#define tbl_u5 PINA.0 //tombol up lantai 5
#define tbl_u4 PINA.1 //tombol up lantai 4
#define tbl_u3 PINA.2 //tombol up lantai 3
#define tbl_u2 PINA.3 //tombol up lantai 2
#define tbl_d1 PINA.4 //tombol down lantai 1
#define tbl_d2 PINA.5 //tombol down lantai 2
#define tbl_d3 PINA.6 //tombol down lantai 3
#define tbl_d4 PINA.7 //tombol down lantai 4
//+++++//
//=====//
/**===== Program Motor Servo =====**//
//=====//
void naik()
{
    servo = 1;
    delay_ms(1.8);
    servo = 0;
    delay_ms(20);
}
void turun()
{
    servo = 1;
    delay_us(5500);
    servo = 0;
    delay_ms(20);
}

```

```

//+++++//
//=====//
//**===== Program indikator led =====**//
//=====//

void l1()
{
    if(mgt1 == 0)
    {
        led1 = 0;
    }
}
void l2()
{
    if(mgt2 == 0)
    {
        led2 = 0;
    }
}
void l3()
{
    if(mgt3 == 0)
    {
        led3 = 0;
    }
}
void l4()
{
    if(mgt4 == 0)
    {
        led4 = 0;
    }
}
void l5()
{
    if(mgt5 == 0)
    {
        led5 = 0;
    }
}
//+++++//

void main(void)
{

    PORTA=0xFF;
    DDRA=0x00;
    PORTB=0x7C;
    DDRB=0x00;
    PORTC=0x3E;
    DDRC=0x3F;
    PORTD=0x00;

```

```

DDRD=0x00;

TCCR0=0x00;
TCNT0=0x00;
OCR0=0x00;

TCCR1A=0x00;
TCCR1B=0x00;
TCNT1H=0x00;
TCNT1L=0x00;
ICR1H=0x00;
ICR1L=0x00;
OCR1AH=0x00;
OCR1AL=0x00;
OCR1BH=0x00;
OCR1BL=0x00;

ASSR=0x00;
TCCR2=0x00;
TCNT2=0x00;
OCR2=0x00;

MCUCR=0x00;
MCUCSR=0x00;
TIMSK=0x00;

ACSR=0x80;
SFIO=0x00;

while (1)
{
    // Place your code here
    /**===== Niak ke Lantai 2 =====**/
    if(tbl_u2 && mgt2 == 1)
    {
        naik();
        led2 = 1;
    }
    else
    {
        tbl_u2 = 0;
        led2 = 1;
        l2();
    }
    //+++++
    /**===== Naik ke Lantai 3 =====**/
    if(tbl_u3 && mgt3 == 1)
    {
        naik();
        led3 = 1;
    }
}

```

```

else
{
    tbl_u3 = 0;
    led3 = 1;
    l3();
}
//+++++//
/**===== Niak ke Lantai 4 =====**//
    if(tbl_u4 && mgt4 == 1)
    {
        naik();
        led4 = 1;
    }
else
{
    tbl_u4 = 0;
    led4 = 1;
    l4();
}
//+++++//
/**===== Naik ke Lantai 5 =====**//
    if(tbl_u5 && mgt5 == 1)
    {
        naik();
        led5 = 1;
    }
else
{
    tbl_u5 = 0;
    led5 = 1;
    l5();
}
//+++++//
/**===== Turun ke Lantai 1 =====**//
    if(tbl_d1 && mgt1 == 1)
    {

        turun();
        led1 = 1;
    }
else
{
    tbl_d1 = 0;
    led1 = 1;
    l1();
}
//+++++//
/**===== Turun ke Lantai 2 =====**//
    if(tbl_d2 && mgt2 == 1)
    {
        turun();

```

```

        led2 = 1;
    }
    else
    {
        tbl_d2 = 0;
        led2 = 1;
        l2();
    }
//+++++//

/**===== Turun ke Lantai 3 =====**/
    if(tbl_d3 && mgt3 == 1)
    {

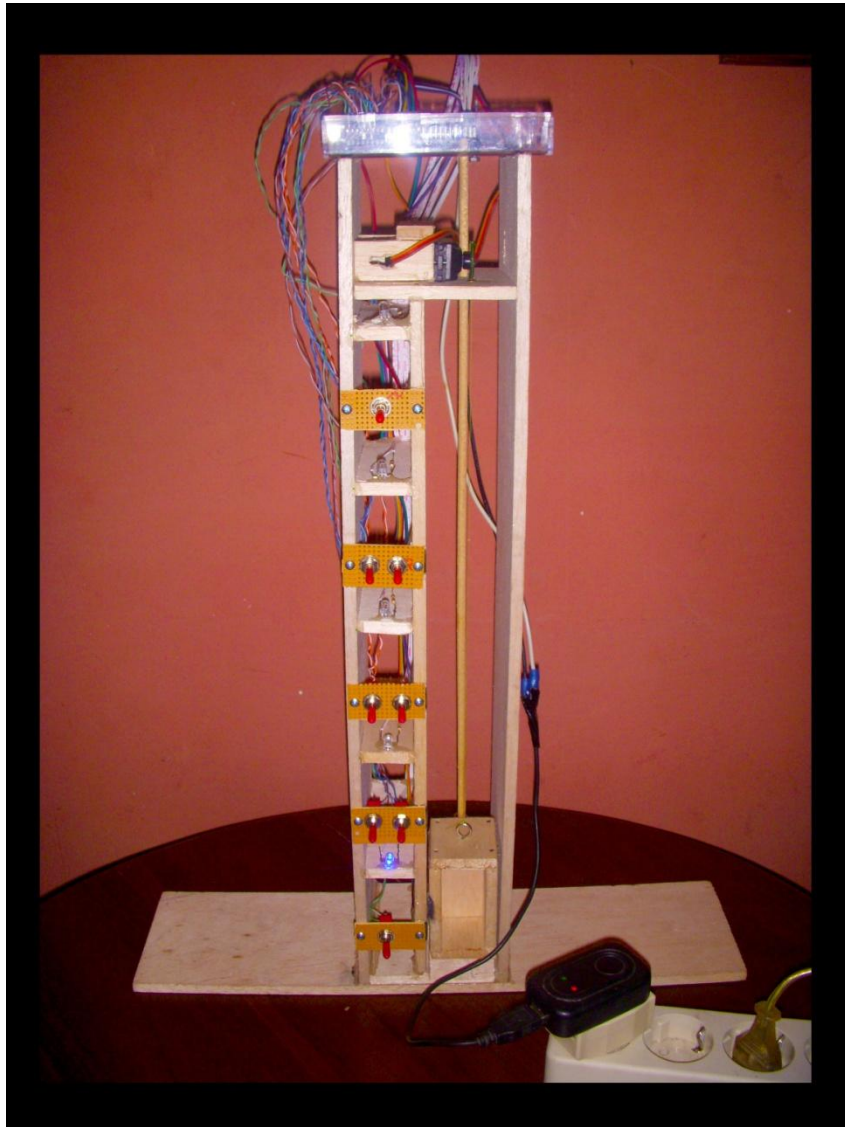
        turun();
        led3 = 1;
    }
    else
    {
        tbl_d3 = 0;
        led1 = 1;
        l3();
    }
//+++++//
/**===== Turun ke Lantai 4 =====**/
    if(tbl_d4 && mgt4 == 1)
    {
        turun();
        led4 = 1;
    }
    else
    {
        tbl_d4 = 0;
        led4 = 1;
        l4();
    }
//+++++//
    };
}

```

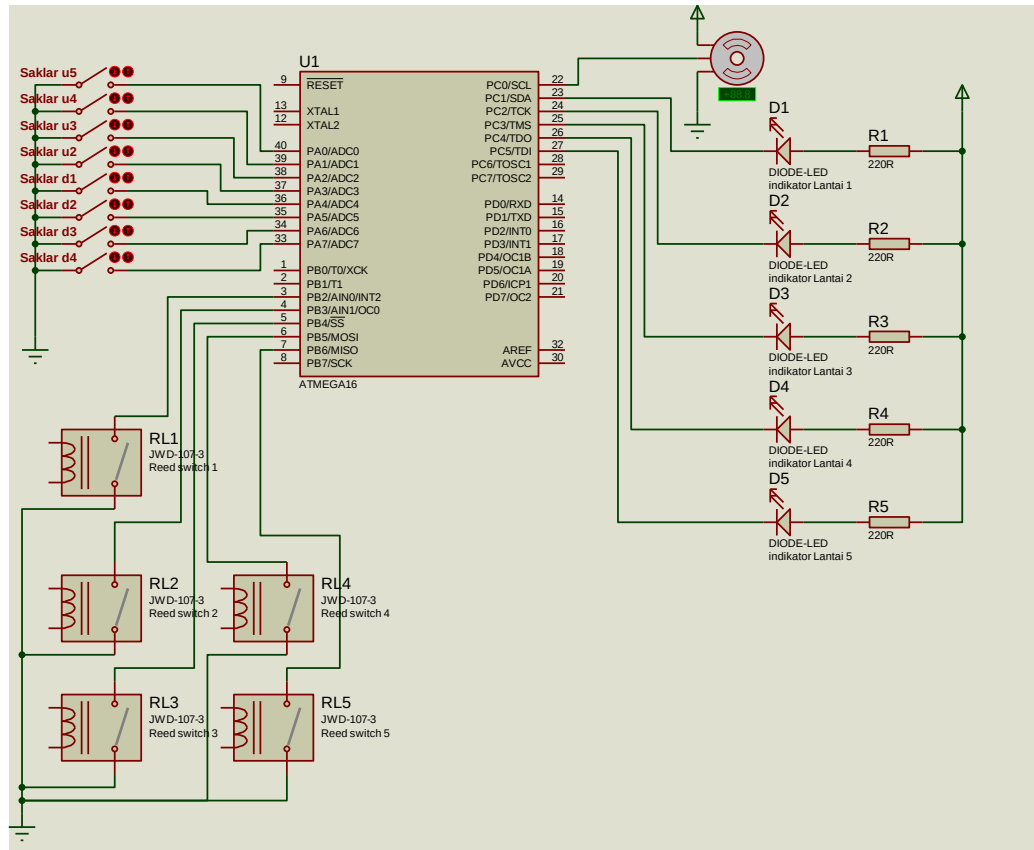
LAMPIRAN B

Gambar *Prototype Elevator*

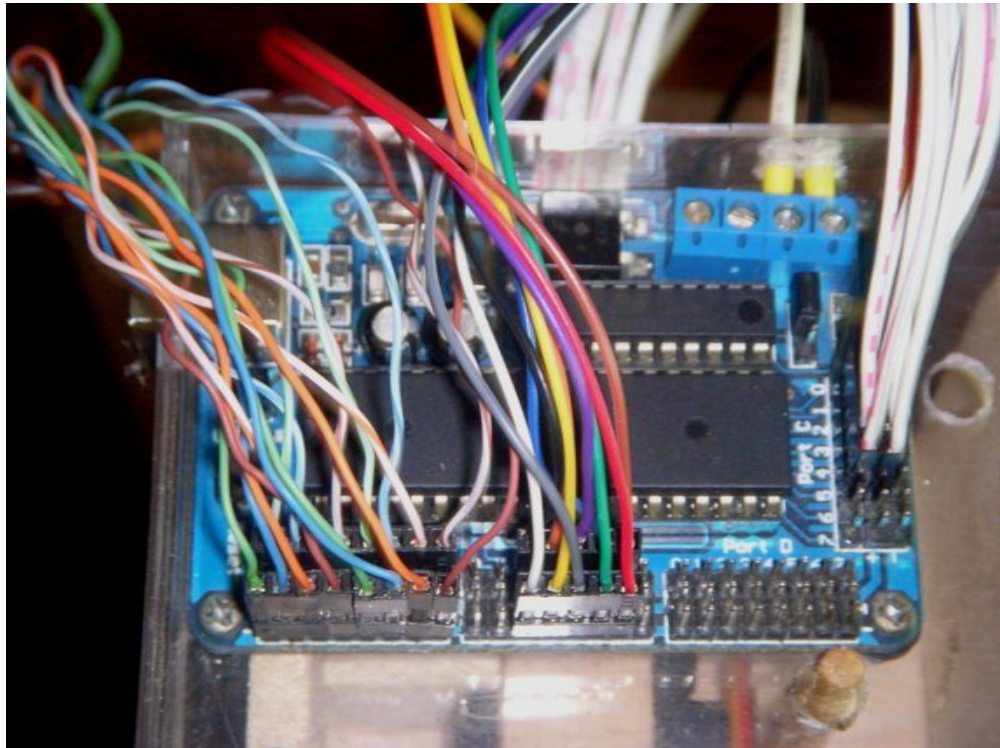
B-1



Gambar B-1 *Prototype elevator*



Gambar B-2 Skema rangkaian *elevator*



Gambar B-3 Rangkaian modul MikroAVR16