

LAMPIRAN

List program

```
#include <mega16.h>
#include <delay.h>
#include <stdlib.h>
// Declare your global variables here
void baca_srf05(){
    //jumlahStep=0;
    //counterSebelumnya=0;
    //counterSekarang=0;
    //pemberian pemicu berupa pulsa positif minimal 10us
    PORTB.0=1;
    delay_ms(10);
    PORTB.0=0;
    //menunggu hingga ECHO = 1
    while(PIND.6==0){};TCNT1=0; ov_counter=0;//PORTB.4=0;
    while(PIND.6==1){};//PORTB.4=1;
    counterSebelumnya=TCNT1;
    jumlahStep=(unsigned long)ov_counter * 0xffff + (unsigned
long)counterSebelumnya;
    jrk=(float)jumlahStep/58.14;
    hasil=62-jrk;//(tinggi_tabung-jrk);
}
void main(void)
{
    // Alphanumeric LCD initialization
    // Connections specified in the
    // Project|Configure|C Compiler|Libraries|Alphanumeric LCD menu:
    // RS - PORTC Bit 0
    // RD - PORTC Bit 1
    // EN - PORTC Bit 2
    // D4 - PORTC Bit 4
    // D5 - PORTC Bit 5
    // D6 - PORTC Bit 6
    // D7 - PORTC Bit 7
    // Characters/line: 16
```

```

lcd_init(16);
lcd_gotoxy(0,0);
lcd_putsf("M NAJID RIDUWAN");
lcd_gotoxy(0,1);
lcd_putsf("");
delay_ms(1000);
lcd_clear();
buff=0;
PORTB=0xFE;
henti=1;
// Global enable interrupts
#asm("sei")

while (1){
    baca_srf04();
    if (hasil!=buff) {buff=hasil; lcd_clear();}
    lcd_gotoxy(0,1);
    lcd_puts("Tinggi=");
    ftoa(hasil,1,temp);
    lcd_gotoxy(8,1) ;
    lcd_puts(temp);
    lcd_putsf("cm");

    if ((hasil>=A)&&(hasil<B)){
        switch (henti) {
            case 0:break;
            case 1:PORTB=0xEE; delay_ms(2000); henti=0; break;}
        lcd_gotoxy(0,0);
        lcd_putsf("speed1:2057 rpm");
        PORTB=0xFC;} //PORTB= b11111100
    else if ((hasil>=B)&&(hasil<C)) {
        switch (henti) {
            case 0:break;
            case 1:PORTB=0xEE; delay_ms(2000); henti=0; break;}
        lcd_gotoxy(0,0);
        lcd_putsf("speed2:5657 rpm");
        PORTB=0xFA;} //PORTB= b11111010

```

```

else if ((hasil>=C)&&(hasil<D)) {
    switch (henti) {
        case 0:break;
        case 1:PORTB=0xEE; delay_ms(2000); henti=0; break;}
    lcd_gotoxy(0,0);
    lcd_putsf("speed3:5835 rpm");
    PORTB=0xF6;} //PORTB= b11110110
else if (hasil>=D) {
    lcd_gotoxy(0,0);
    lcd_putsf("speed4:5869 rpm");
    PORTB=0xEE;}//PORTB= b11101110
else {
    henti=1;
    lcd_gotoxy(0,0);
    lcd_putsf("berhenti:0 rpm ");
    PORTB=0xFE;}//PORTB= b11111110
delay_ms(1000);
}
}

```