TEMP.C

```
#asm
   .equ __lcd_port=0x12 ;PORTD
#endasm

#include <mega8535.h>
#include <lcd.h>
#include <delay.h>
#include <stdio.h>

#define ADC_VREF_TYPE 0x00

// Read the AD conversion result
unsigned int read_adc(unsigned char adc_input)
{
ADMUX=adc_input | ADC_VREF_TYPE;
// Start the AD conversion
ADCSRA |=0x40;
// Wait for the AD conversion to complete
while ((ADCSRA & 0x10)==0);
ADCSRA |=0x10;
return ADCW;
}

void main(void)
{
unsigned char key;
unsigned int temp, temp_set=20;
char buf[20];
PORTB=0x00;
DDRB=0xFF;
PORTB=0xFF;
// ADC initialization
// ADC Clock frequency: 1000.000 kHz
// ADC Voltage Reference: AREF pin
// ADC High Speed Mode: Off
// ADC Auto Trigger Source: None
ADMUX=ADC_VREF_TYPE;
ADCSRA=0x83;
SFIOR&=0xEF;

lcd_init(16);
lcd_clear();
delay_ms(50);

while (1)
      {
      temp =read_adc(0);
      temp = temp*48/100;
      lcd_gotoxy(0,0);
       sprintf(buf,"Set val:%i Deg ",temp_set);
       lcd_puts(buf);
      lcd_gotoxy(0,1);
       sprintf(buf,"Temper :%i Deg ",temp);
       lcd_puts(buf);
       key=PINC;
       if(key==254)
      {
       temp_set=temp_set-1;
       if(temp_set<5) temp_set=5;
      }
       else if(key==253)
      {
       temp_set=temp_set+1;
       if(temp_set>40)
       temp_set=40;
      }
       if (temp<temp_set-1)
      {
       PORTB.0=1;
      }
       else if(temp>temp_set+1)
      { PORTB.0=0;
      }
       delay_ms(20);
      };
}
```