

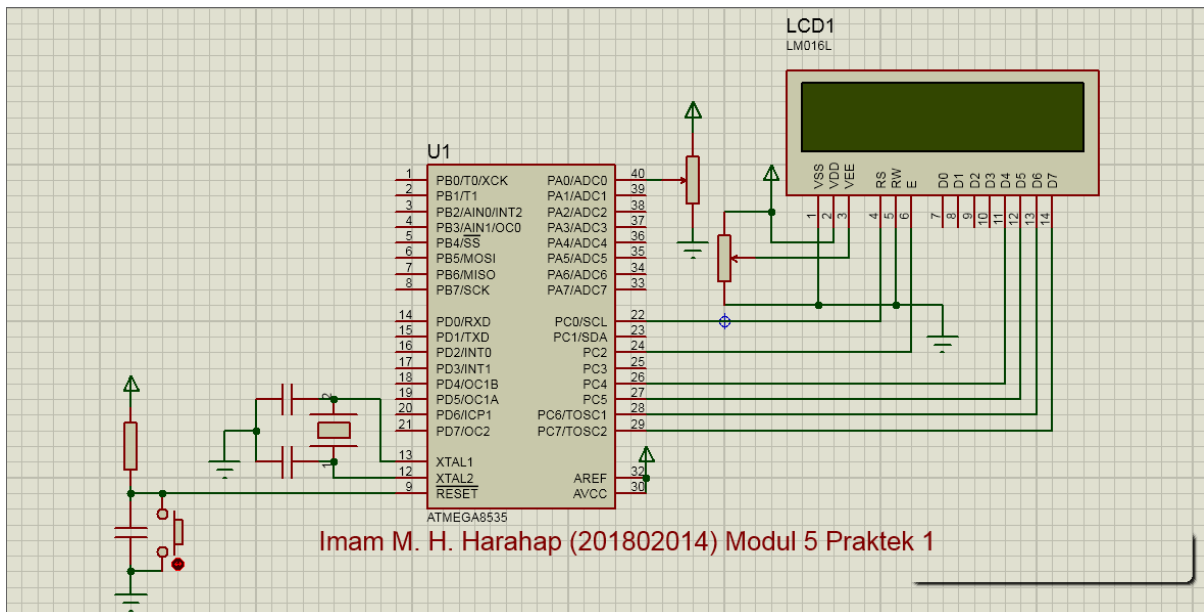
# Imam Muis Hamzah Harahap

## Praktik Pemograman ADC

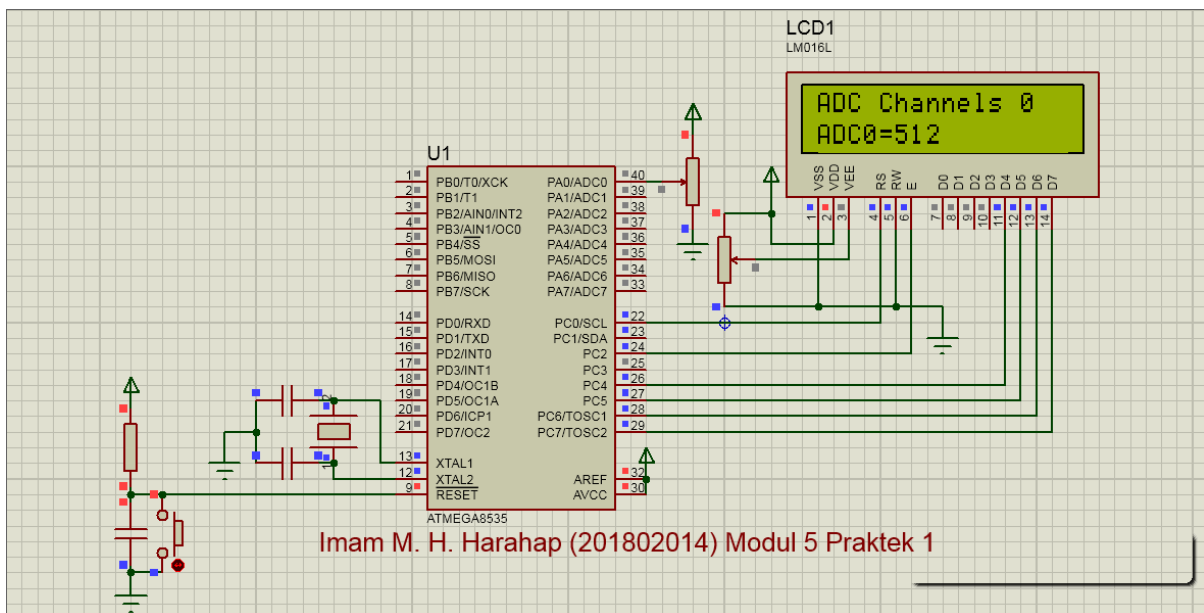
### 1. Program

```
1  /*****
2  Date   : 04/10/2019
3  Author : Imam M. H. Harahap
4  Company : Mekatronika Politeknik Engineering Indorama
5  Comments: Modul 5 Praktek 1
6  *****/
7  //Program 1 : membaca ADC pada Channel 0
8
9  #include <mega8535.h>
10 #include <delay.h>
11 #include <alcd.h>
12 #include <stdio.h>
13
14 unsigned int D;
15 char str[10];
16
17 void main(void){
18     ADCSRA=0B10000111;
19     lcd_init(16);
20     lcd_clear();
21     lcd_putsf("ADC Channels 0");
22     lcd_gotoxy(0,1);
23     lcd_putsf("ADC0=");
24
25     while (1){
26         ADMUX=0B01000000;
27         delay_us(10);
28         ADCSRA|=0B01000000;
29         while ((ADCSRA & 0B00010000)==0);
30         ADCSRA|=0B00010000;
31
32         D=ADCW;
33         sprintf(str,"%d ",D);
34         lcd_gotoxy(5,1);
35         lcd_puts(str);
36         delay_ms(1000);
37     }
38 }
```

## 2. Hasil



Rangkaian dalam keadaan standby



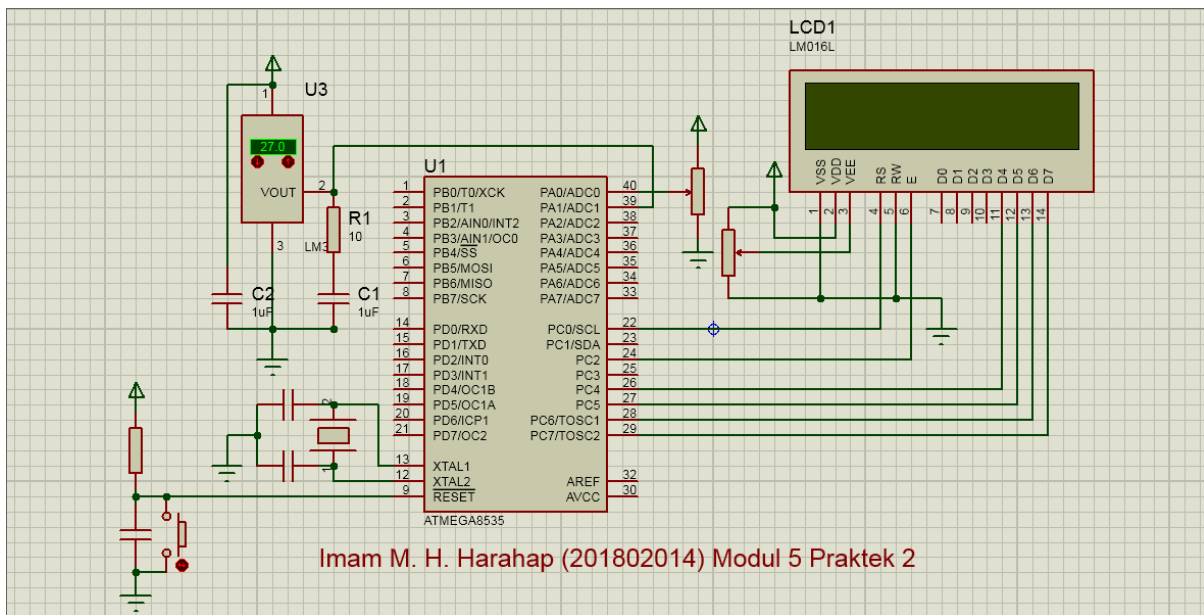
Rangkaian dalam keadaan running

## Praktek Pemograman Sensor Suhu dengan LM-35

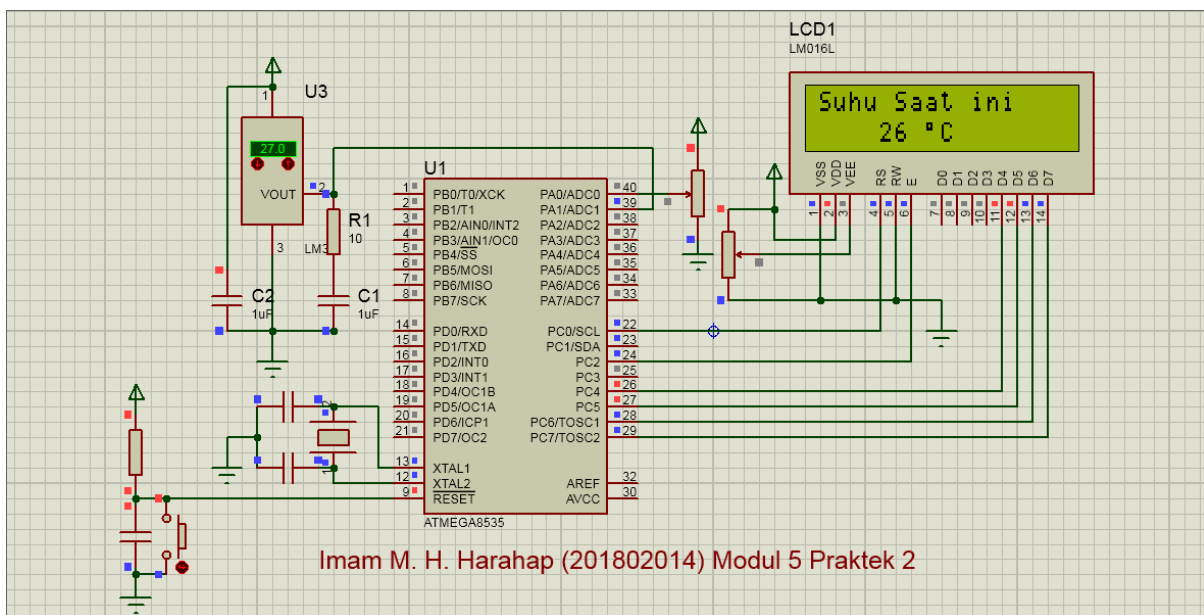
### 1. Program

```
1  /*****
2  Date    : 27/09/2019
3  Author  : Imam M. H. Harahap
4  Company : Mekatronika Politeknik Enjinering Indorama
5  Comments: Modul 5 Praktek 2
6  *****/
7
8  //Program 2 Sensor Suhu
9
10 #include <mega8535.h>
11 #include <delay.h>
12 #include <alcd.h>
13 #include <stdio.h>
14
15 unsigned int D,V,T;
16 char str[16];
17
18 void main(void){
19     ADCSRA=0B10000111;
20     lcd_init(16);
21     lcd_clear();
22     lcd_putsf("Suhu Saat ini ");
23     lcd_gotoxy(7,1);
24     lcd_putchar(0xdf);
25
26     while (1){
27         ADMUX=0B01000001;
28         delay_us(10);
29         ADCSRA|=0B01000000;
30         while ((ADCSRA & 0B00010000)==0);
31         ADCSRA|=0B00010000;
32
33         D=ADCW;
34         V = D * 2.55;
35         T=V/100;
36         sprintf(str,"%d",T);
37         lcd_gotoxy(4,1);
38         lcd_puts(str);
39         lcd_gotoxy(8,1);
40         lcd_puts("C");
41         delay_ms(1000);
42     }
43 }
```

## 2. Hasil



Rangkaian dalam keadaan standby



Rangkaian dalam keadaan running