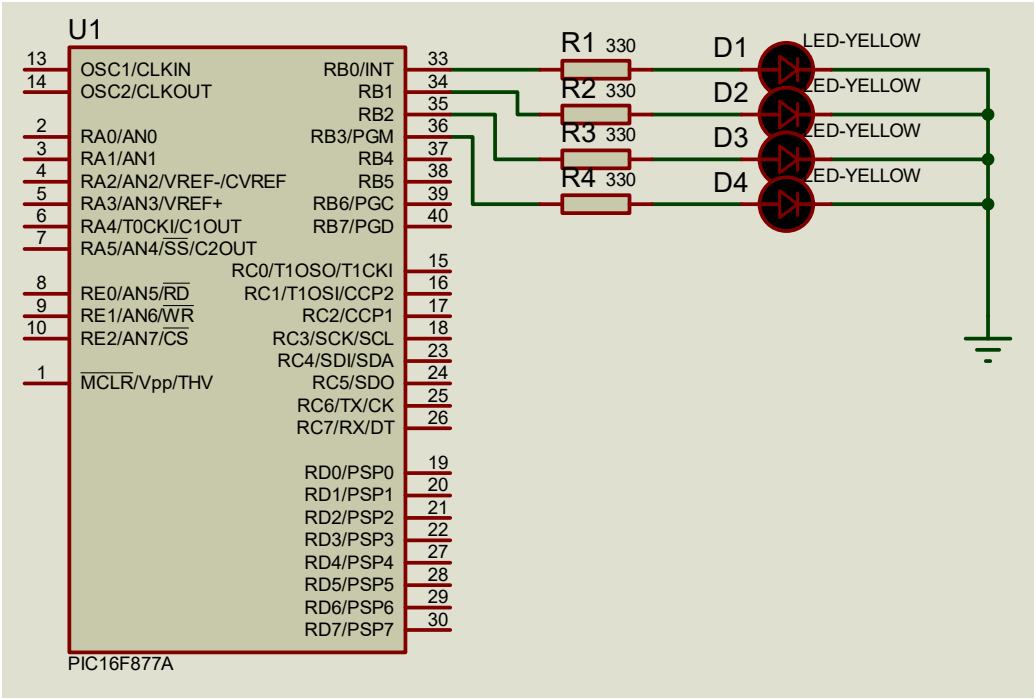
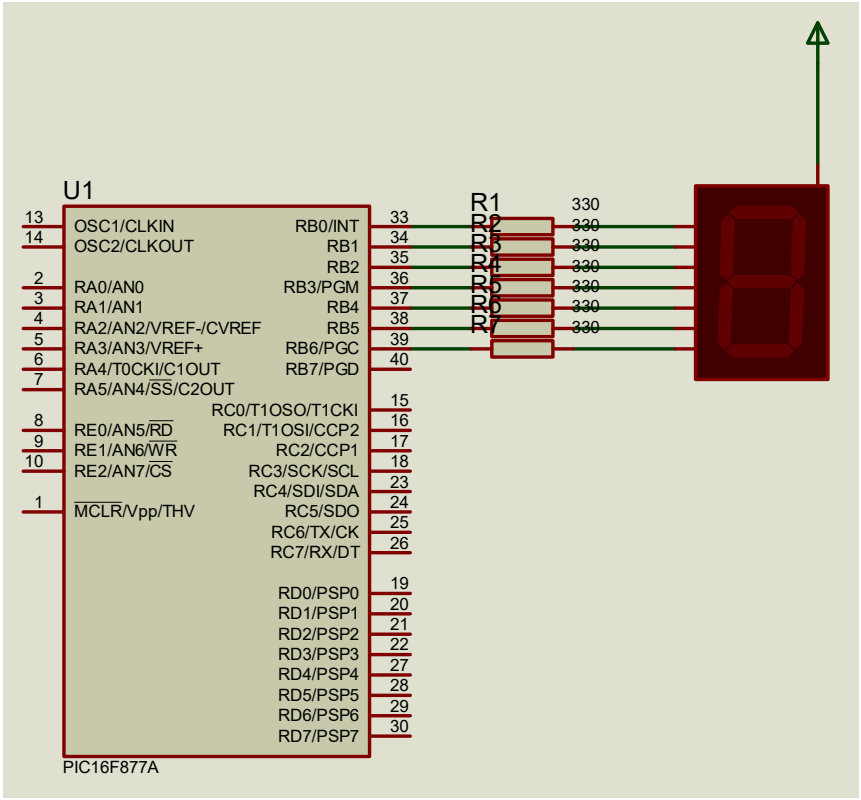
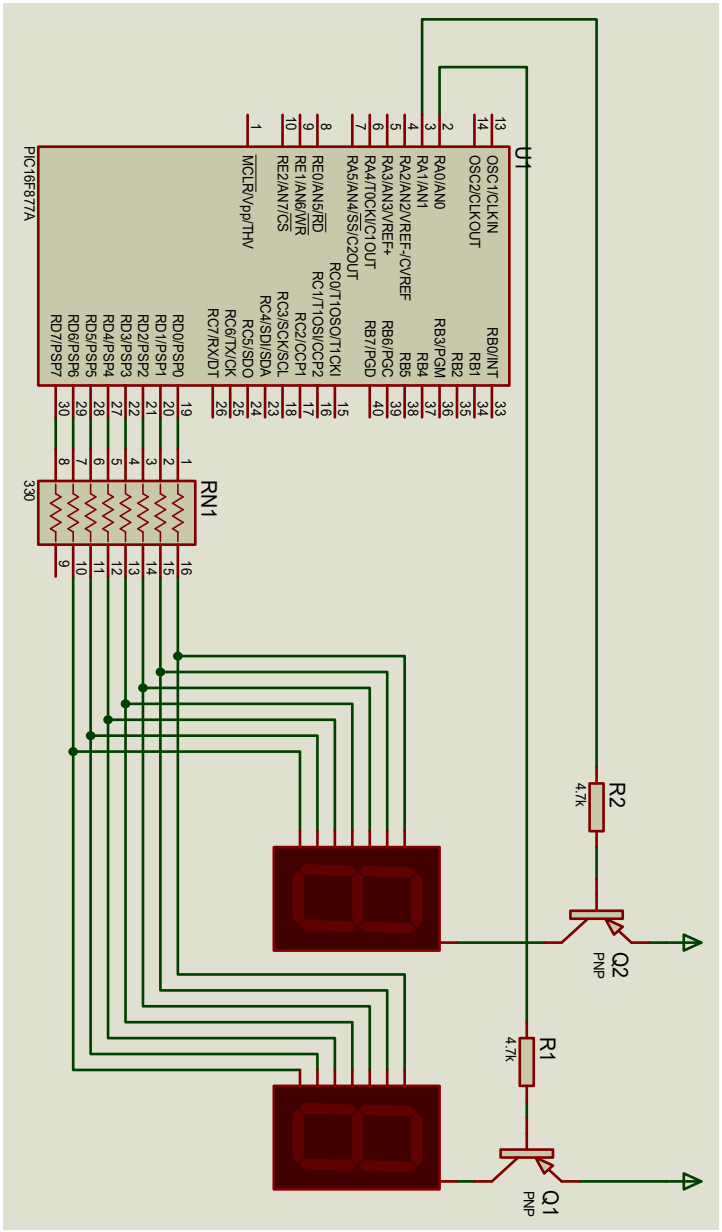
```
//DK LED DON SANG DAN
#include<16f877a.h>
#fuses hs
#use delay(clock=4M)
#byte portb=0x06
void main()
{
   set_tris_b(0);
   portb=0b0000;
   delay_ms(1000);
   portb=0b0001;
   delay_ms(1000);
   portb=0b0011;
   delay_ms(1000);
   portb=0b0111;
   delay_ms(1000);
   portb=0b1111;
}
```



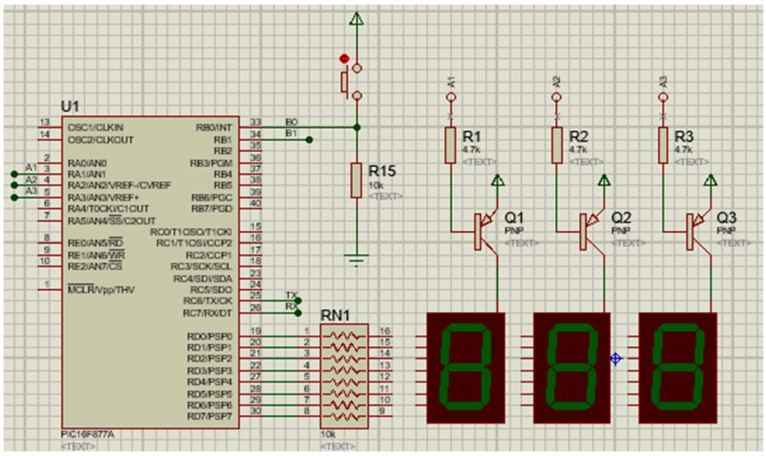
```
//LAP TRINH CHO VI DIEU KHIEN PIC
//DIEU KHIEN 1 LED 7 DOAN HIEN THI TU O DEN 9
#include<16f877a.h>
#fuses hs
#use delay(clock=4M)
#byte portb=0x06
int8 maled7[10]={0xc0,0xf9,0xa4,0xb0,
0x99,0x92,0x82,0xf8,0x80,0x90};
void main()
{
  set_tris_b(0);//Thuc hien 1 lan
  while(1)
  {
    portb = maled7[0];
    delay_ms(100);
    portb= maled7[1];
    delay_ms(100);
    ……
    portb= maled7[9];
    delay_ms(100);
  }
}
```



```
//MO PHONG CO 4 CON LED 7 DOAN CHI QUAN TAM 2 CON CUOI CUNG
//VI TRI LED CHUC VA DON VI CO THE DOI CHO NHAU
//DK 2 SEG HIEN THI 00 DEN 99
#include <16f877a.h>
#fuses hs
#use delay(clock=4000000)
#byte portd=0x08
#bit ra0=0x05.0
#bit ra1=0x05.1
int8 maled7[10]={0xc0,0xf9,0xa4,0xb0,0x99,0x92,0x82,0xf8,0x80,0x90};
int dem,chuc,donvi,i;
void main()
{
  set_tris_a(0x00);
  set_tris_D(0x00);
  For (dem=00;dem<99;dem++)
  {
       chuc=dem/10;
       donvi=dem%10;
       For (i=1;i<=100;i++)
       {
         PORTD=0XFF; //DANH CHO MO PHONG
         RA0=1;
         RA1=0;
         portd=maled7[chuc];
         delay_ms(5);
         PORTD=0XFF; //DANH CHO MO PHONG
         RA0=0;
         RA1=1;
         portd=maled7[donvi];
         delay_ms(5);
       }
   }
}
```



```
//MO PHONG CO 4 CON LED 7 DOAN CHI QUAN TAM 2 CON CUOI CUNG
//VI TRI LED CHUC VA DON VI CO THE DOI CHO NHAU
//DK 3 LED 7 DOAN 0 DEN 256
#include <16f877a.h>
#fuses hs
#use delay(clock=4000000)
#byte portd=0x08
#bit ra1=0x05.1
#bit ra2=0x05.2
#bit ra3=0x05.3
int8 maled7[10]={0xc0,0xf9,0xa4,0xb0,0x99,0x92,0x82,0xf8,0x80,0x90};
int tram=0,chuc=0,donvi=0,i=0;
int16 dem=0;
void main()
{
  set_tris_a(0);
  set_tris_d(0);
  for(dem=0;dem<=256;dem++)
  {
    tram=dem/100;
    chuc=dem/10%10;
    donvi=dem%10;
    for(i=1;i<=34;i++)
    {
      PORTD=0XFF; //DANH CHO MO PHONG
      ra1=0;ra2=1;ra3=1;
      portd=maled7[tram];
      delay_ms(5);
      PORTD=0XFF; //DANH CHO MO PHONG
      ra1=1;ra2=0;ra3=1;
      portd=maled7[chuc];
      delay_ms(5);
      PORTD=0XFF; //DANH CHO MO PHONG
      ra1=1;ra2=1;ra3=0;
      portd=maled7[donvi];
      delay_ms(5);
    }
  }
}
```

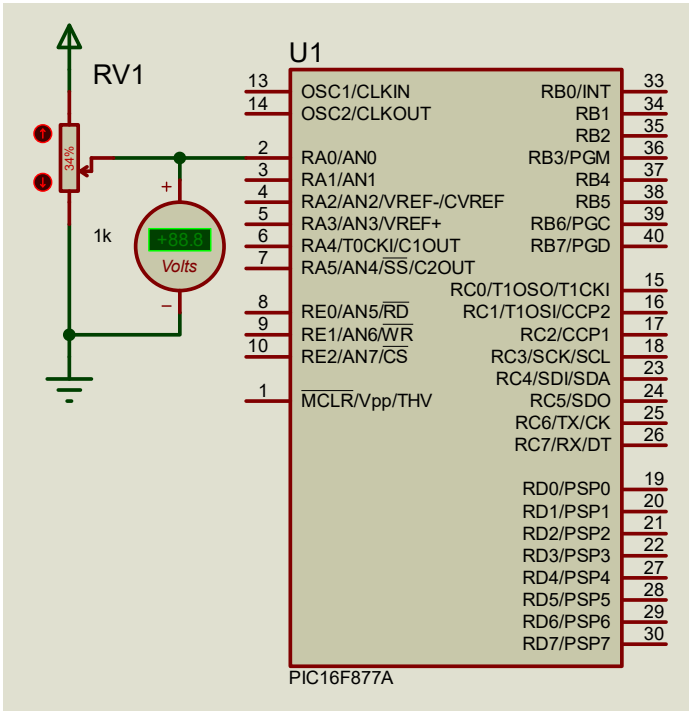



```
//DEM SO LAN NHAN NUT HIEN THI LEN 7SEG
#include <16f877a.h>
#fuses hs
#use delay(clock=4000000)
#byte portd=0x08
#bit ra1=0x05.1
#bit ra2=0x05.2
#bit ra3=0x05.3
#bit rB0=0x06.0
int8 maled7[10]={0xc0,0xf9,0xa4,0xb0,0x99,0x92,0x82,0xf8,0x80,0x90};
int tram=0,chuc=0,donvi=0,i=0;
int16 solan=0;
void main()
{
    set_tris_a(0);
    set_tris_b(1);// NUT NHAN GAN CHAN RB0
    set_tris_d(0);
    while(1)
    {
      if(rB0==1)
      {
        while(rb0==1)
        {
          //CHONG NHAY LED 7 DOAN
          PORTD=0XFF; //DANH CHO MO PHONG
          ra1=0;ra2=1;ra3=1;
          portd=maled7[tram];
          delay_ms(5);
          PORTD=0XFF; //DANH CHO MO PHONG
          ra1=1;ra2=0;ra3=1;
          portd=maled7[chuc];
          delay_ms(5);
          PORTD=0XFF; //DANH CHO MO PHONG
          ra1=1;ra2=1;ra3=0;
          portd=maled7[donvi];
          delay_ms(5);
        }
        solan++;
      }
      tram=solan/100;
      chuc=solan/10%10;
      donvi=solan%10;
      PORTD=0XFF; //DANH CHO MO PHONG
      ra1=0;ra2=1;ra3=1;
      portd=maled7[tram];
      delay_ms(5);
      PORTD=0XFF; //DANH CHO MO PHONG
      ra1=1;ra2=0;ra3=1;
      portd=maled7[chuc];
      delay_ms(5);
      PORTD=0XFF; //DANH CHO MO PHONG
      ra1=1;ra2=1;ra3=0;
      portd=maled7[donvi];
      delay_ms(5);
    }
}
```

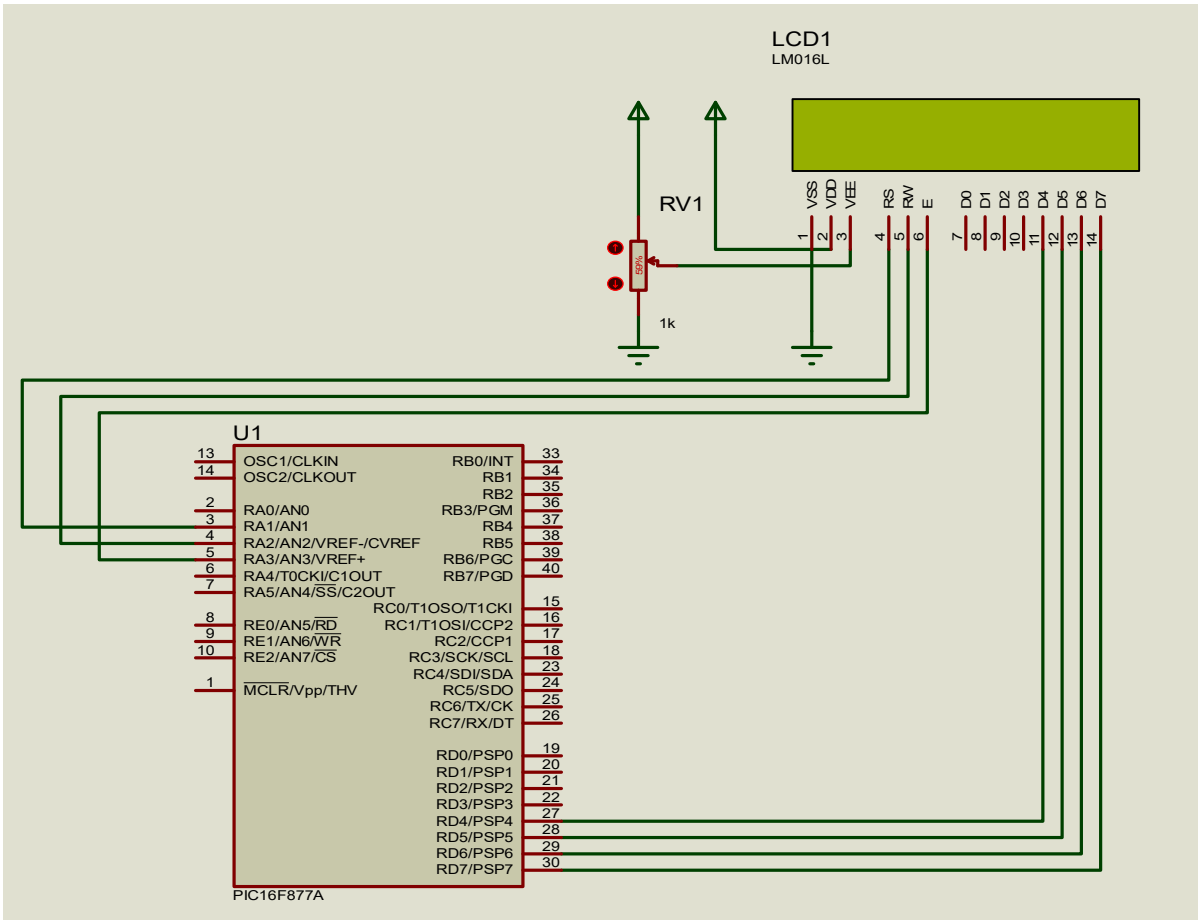
```
//DPC GIA TRI ADC
//HIEN THI TREN LED DON
#include <16f877a.h>
#device adc=8
#fuses hs
#use delay(clock=4000000)
#byte portc=0x07//GAN 8 LED DON
int value;//LUU GIA TRI ADC
void  main( )
{
  set_tris_a(1);
  set_tris_c(0);
  setup_ADC(ADC_clock_internal);
  setup_ADC_ports(AN0);
  set_ADC_channel(0);
  delay_ms(10);
  while(1)
  {  value=read_adc();
     portc=value;
  }
}
```

```
//HIEN THI TREN LCD
//HIEN THI HO TEN & MSSV
#include<16f877a.h>
#fuses hs
#use delay (clock = 4M)
 #define LCD_ENABLE_PIN  PIN_A3
#define LCD_RS_PIN      PIN_A1
#define LCD_RW_PIN      PIN_A2
#define LCD_DATA4       PIN_D4
#define LCD_DATA5       PIN_D5
#define LCD_DATA6       PIN_D6
#define LCD_DATA7       PIN_D7
#include<lcd.c>
void main()
{  set_tris_a(0b0000000);
  set_tris_b(0b00000000);
  lcd_init();
  lcd_gotoxy(1,1);
  lcd_putc("VO THANH NHAN");
  lcd_gotoxy(1,2);
  lcd_putc("0303191498");
}
```

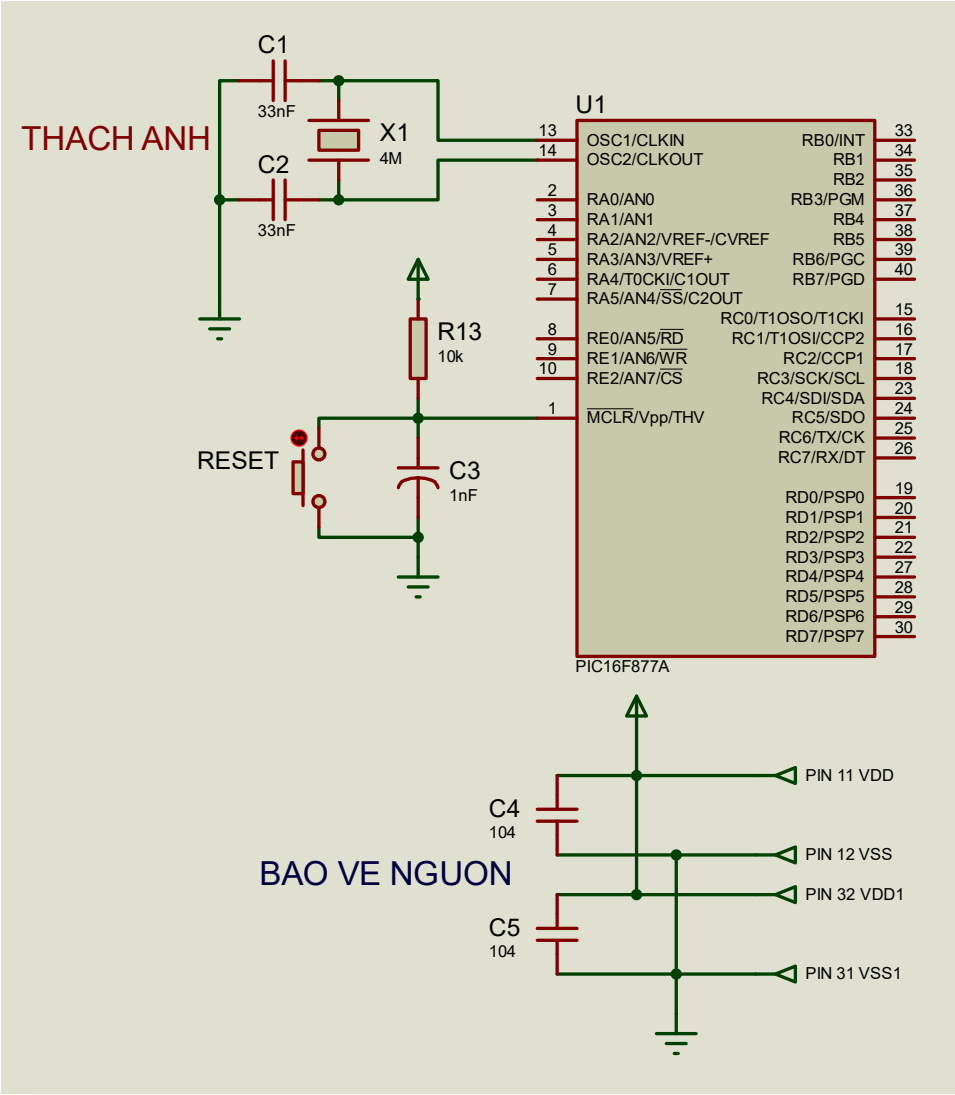
DOC GIA TRI ADC



HIEN THI TREN LED LCD



MACH PHU



BẢNG MÃ LED 7 ĐOẠN CHO LED A CHUNG									
Số hiển thị	Hex	RB7	RB6	RB5	RB4	RB3	RB2	RB1	RB0
0: SÁNG – 1: TẮT		DP	G	F	E	D	C	B	A
0	0xC0	1	1	0	0	0	0	0	0
1	0xF9	1	1	1	1	1	0	0	1
2	0xA4	1	0	1	0	0	1	0	0
3	0xB0	1	0	1	1	0	0	0	0
4	0x99	1	0	0	1	1	0	0	1
5	0x92	1	0	0	1	0	0	1	0
6	0x82	1	0	0	0	0	0	1	0
7	0xF8	1		1	1	1	0	0	0
8	0x80	1	0	0	0	0	0	0	0
9	0x90	1	0	0	1	0	0	0	0