```
#include <xc.h>
#define _XTAL_FREQ 4000000
unsigned char m1,m2,m3,m4;
#define en PORTCbits.RC3
#define rs PORTCbits.RC1
void lcd_string(unsigned char *S);
void lcdinit(void);
void lcdcmd(unsigned char data);
void lcddata(unsigned char data);
unsigned int atod(void); //analog to digital conversion
void digit_separate(unsigned int temp1);
void lcd_string(unsigned char *S)
{
        while(*S)
 {
        Icddata(*S);
void lcdcmd(unsigned char data)
{
        PORTD=data;
        en=0;
        rs=0;
         _delay_ms(1);
        en=1;
          _delay_ms(1);
        en=0:
}
void lcddata(unsigned char data)
{
        PORTD=data;
        en=0;
        rs=1;
          delay_ms(1);
        en=1;
          delay_ms(1);
        en=0;
void lcdinit(void)
{
```

```
lcdcmd(0x01);
          delay_ms(70);
        lcdcmd(0x38);
          delay_ms(1);
   lcdcmd(0x0E);
          delay_ms(1);
        lcdcmd(0x06);
          delay_ms(1);
        lcdcmd(0x80);
void main(void)
OSCCON=0xEF; //EF 4 MHz
ADCON0=0X05:
ADCON1ADCON0=0X0E;
ADCON2=0XA4;
TRISAbits.TRISA1=1;//RA1 or AN1 input
TRISC=0x00:
TRISD=0x00; // PORTD IS CONNECTED TO DATA PINS OF LCD DISPLAY
__delay_ms(400);
lcdinit();
lcd_string("RIT WELCOMES YOU");
__delay_ms(2000);
unsigned int VA;
lcdcmd(0x01);
  delay ms(1);
lcdcmd(0x80);
lcd_string("ADC Result");
while(1)
{
  VA=atod();
  digit_separate(VA);
  lcdcmd(0xC0);
  lcddata(m4);
  lcddata(m3);
  Icddata(m2);
  lcddata(m1);
  __delay_ms(1000);
}
}
unsigned int atod(void)
{
```

```
unsigned int adcdata;
        ADCON0bits.GO=1;
        while(ADCON0bits.GO==1);
 adcdata=ADRESH;
 adcdata=(adcdata << 8);</pre>
  adcdata=adcdata | ADRESL;
 return (adcdata);
void digit_separate(unsigned int temp1)
unsigned int tmp;
unsigned char y;
m1=temp1%10;
tmp=temp1/10;
m2=tmp%10;
y=tmp/10;
m3=(y%10);
m4=(y/10);
m1=m1+0x30;
m2=m2+0x30;
m3=m3+0x30;
m4=m4+0x30;
}
```