```
#include <mega16.h>

#include <stdio.h>

#include <delay.h>

#include <alcd.h>

int s0,s1,s2,s3;
int led[16] = {1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16};
int ln,lednumber;
float maxled = 1023;
char ledtextnum[2];
char maxtextled[4];

void ledmux()
{
PORTB.4 = s0;
PORTB.5 = s1;
PORTB.6 = s2;
PORTB.7 = s3;
}
```

```
void findled()
{
ledmux();
    s0=0;
    s1=0;
    s2=0;
    s3=0;
    led[1] = read_adc(0);
    led[1] = (led[1]/1023)*5;

    s0=0;
    s1=0;
    s2=0;
    s3=1;
    led[2] = read_adc(0);
    led[2] = (led[2]/1023)*5;

    s0=0;
    s1=0;
    s2=1;
    s3=0;
```

```
led[3] = read_adc(0);
led[3] = (led[3]/1023)*5;

s0=0;
s1=0;
s2=1;
s3=1;
led[4] = read_adc(0);
led[4] = (led[4]/1023)*5;

s0=0;
s1=1;
s2=0;
s3=0;
led[5] = read_adc(0);
led[5] = (led[5]/1023)*5;

s0=0;
s1=1;
s2=0;
s3=1;
led[6] = read_adc(0);
led[6] = (led[6]/1023)*5;
```

```
s0=0;

s1=1;

s2=1;

s3=0;

led[7] = read_adc(0);

led[7] = (led[7]/1023)*5;


s0=0;

s1=1;

s2=1;

s3=1;

led[8] = read_adc(0);

led[8] = (led[8]/1023)*5;


s0=1;

s1=0;

s2=0;

s3=0;

led[9] = read_adc(0);

led[9] = (led[9]/1023)*5;
```

```
s0=1;

s1=0;

s2=0;

s3=1;

led[10] = read_adc(0);

led[10] = (led[10]/1023)*5;


s0=1;

s1=0;

s2=1;

s3=0;

led[11] = read_adc(0);

led[11] = (led[11]/1023)*5;


s0=1;

s1=0;

s2=1;

s3=1;

led[12] = read_adc(0);

led[12] = (led[12]/1023)*5;
```

```
s0=1;

s1=1;

s2=0;

s3=0;

led[13] = read_adc(0);

led[13] = (led[13]/1023)*5;


s0=1;

s1=1;

s2=0;

s3=1;

led[14] = read_adc(0);

led[14] = (led[14]/1023)*5;


s0=1;

s1=1;

s2=1;

s3=0;

led[15] = read_adc(0);

led[15] = (led[15]/1023)*5;
```

```
    s0=1;
    s1=1;
    s2=1;
    s3=1;
    led[16] = read_adc(0);
    led[16] = (led[16]/1023)*5;

    for (ln = 1 ; ln = 16 ; ln++)
    {
    if (led[ln] <maxled)
    {
        maxled = led[ln];
        lednumber = ln;
    }
    }
while (1)
    {
    Ledmux();
    findled();
```

```
    sprintf(ledtextnum, "%d", lednumber);
    sprintf(maxtextled, "%d", maxled);
    lcd_gotoxy(0,0);
    lcd_putsf("LED");
    lcd_gotoxy(3,0);
    lcd_puts(ledtextnum);
    lcd_gotoxy(5,0);
    lcd_putsf(" :");
    lcd_gotoxy(0,1);
    lcd_puts(maxtextled);

    PORTD.0 = 0;
    OCR0 = 1;

    PORTD.1 = 0;
    OCR1B = 1;

    PORTD.2 = 0;
    OCR2 = 1

    PORTD.3 = 0;
    OCR1A = 1;
    }
}
```