

# 实验4：4×4 小键盘的使用

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## 实验内容

1. 用8255A作接口,用行扫描法识别闭合键.要求程序编成循环结构,不按键时无输出,按下某个键,将其对应的字符显示出来,并且只显示一次.
2. 了解行反转法编程要点.

## 程序代码

```
#include <stdio.h>
#include <stdlib.h>
#include <conio.h>
#include <bios.h>
#include <ctype.h>
#include <process.h>

void dis(void);
void key(void);
void clear(void);
void cccscan(void);
void putbuf(void);
void getkey(void);
void delay(int time);

//*****根据查看配置信息修改下列符号值*****
#define IOY0 0x3000
#define MY8255_A IOY0 + 0x00*2
#define MY8255_B IOY0 + 0x01*2
#define MY8255_C IOY0 + 0x02*2
#define MY8255_MODE IOY0 + 0x03*2

char a[] = {0x3f, 0x06, 0x5b, 0x4f, 0x66, 0x6d, 0x7d, 0x07, 0x7f, 0x6f, 0x77,
0x7c, 0x39, 0x5e, 0x79, 0x71};
char b[] = {0x00, 0x00, 0x00, 0x00, 0x00, 0x00};
int cc;
int b_n;
int n;

void main()
{
    outp(MY8255_MODE, 0x81);
    b_n = 5;

    while(1)
    {
        dis();
        clear();
        cccscan();
        if (cc)
```

```

    {
        dis();
        delay(0x100);
        delay(0x100);
        clear();
        ccsScan();
        if (cc)
        {
            getKey();
        }
        key();
    }

void getKey(void)
{
    int i;
    int j = 0xfe;

    for(i=0;i<=3;i++)
    {
        outp(MY8255_A, j);

        if ( !(inp(MY8255_C) & 0x01) )
        {
            n = i + 0;
            putbuf();
            return;
        }

        if ( !(inp(MY8255_C) & 0x02) )
        {
            n = i + 4;
            putbuf();
            return;
        }

        if ( !(inp(MY8255_C) & 0x04) )
        {
            n = i + 8;
            putbuf();
            return;
        }

        if ( !(inp(MY8255_C) & 0x08) )
        {
            n = i + 12;
            putbuf();
            return;
        }

        j <=> 1;
    }
}

void ccsScan(void)
{

```

```

    outp(MY8255_A, 0x00);
    cc = inp(MY8255_C);
    cc = (~cc) & 0x0F;
}

void dis(void)
{
    int i;
    int j = 0xdf;

    for(i=0;i<=5;i++)
    {
        outp(MY8255_A, j);
        outp(MY8255_B, a[b[i]]);

        delay(0x100);
        j >>= 1;
        j |= 0x80;
    }
}

void clear(void)
{
    outp(MY8255_B, 0x00);
}

void putbuf(void)
{
    b[b_n] = n;
    b_n--;
    if (b_n == -1)
    {
        b_n = 5;
    }

    dis();
    clear();
    ccsan();
    while (cc)
    {
        dis();
        clear();
        ccsan();
    }
}

void key(void)
{
    if (bioskey(1) != 0)
    {
        exit(0);
    }
}

void delay(int time)
{
    int i;
    int j;
}

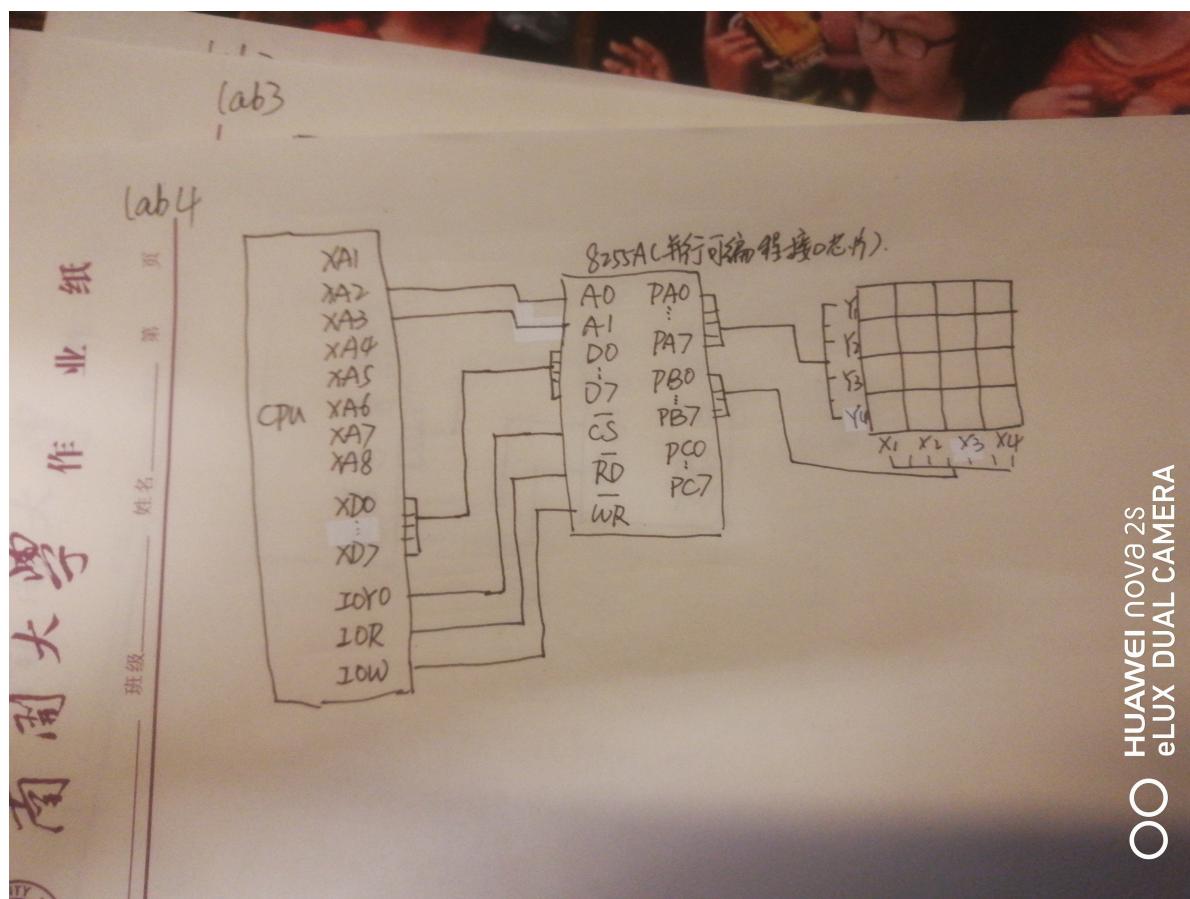
```

```

for(i=0;i<=time;i++)
{
    for(j=0;j<=0x100;j++)
    {
    }
}
return;
}

```

## 抽象接线图



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eLUX DUAL CAMERA

## 实验连线图

