51单片机-按压16个键分别显示从0到F

设计思路

1. 将4行接入`P1.4`-`P1.7`接口，每隔10ms进行扫描，即每10ms给该四个接口分别接上低电平
2. 将4列接入`P1.0`-`P1.3`接口，用来判断该列是否有按键按下
3. 若行列都为低电平则可定位到对应某一个按键按下，即可用数码管显示对应字符

代码实现

```c
#include "REG51.h"
sbit L0 = 0x90;
sbit L1 = 0x91;
sbit L2 = 0x92;
sbit L3 = 0x93;

void Delay(unsigned int xms){
    unsigned char i,j;
    while(xms--){
        i = 2;
        j = 239;
        do{
            while(--j);
        }while(--i);
    }
}
int main(){
    while(1){
        P1 = 0xEF; //行扫描初值1110 1111
        if (L0==0) P2 = 0xC0;//0
        if (L1==0) P2 = 0xF9;//1
        if (L2==0) P2 = 0xA4;//2
        if (L3==0) P2 = 0xB0;//3
        Delay(10);

        P1 = 0xDF; //行扫描初值1101 1111
        if (L0==0) P2 = 0x99;//4
        if (L1==0) P2 = 0x92;//5
        if (L2==0) P2 = 0x82;//6
        if (L3==0) P2 = 0xF8;//7
        Delay(10);

        P1 = 0xBF; //行扫描初值1011 1111
        if (L0==0) P2 = 0x80;//8
        if (L1==0) P2 = 0x90;//9
        if (L2==0) P2 = 0x88;//A
        if (L3==0) P2 = 0x83;//b
        Delay(10);

        P1 = 0x7F; //行扫描初值0111 1111
        if (L0==0) P2 = 0xC6;//C
```

```
        if (L1==0) P2 = 0xA1;//d
        if (L2==0) P2 = 0x86;//E
        if (L3==0) P2 = 0x8E;//F
        Delay(10);
    }
}
```