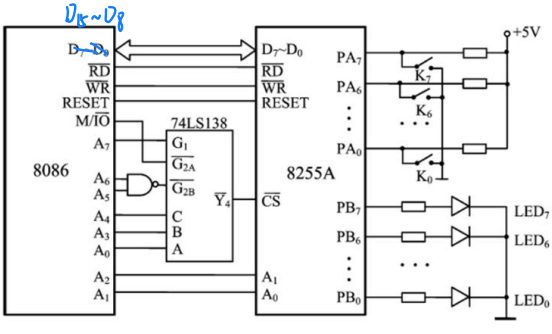
微机系统作业2　　赵伯侯　　20213021811156

1. 程序如下所示

```
        MOV  BX, 1000H
        MOV  CX, 100
READ_S1: IN  AL, 81H
        TEST AL, 02H
        JZ   READ_S1
        IN   AL, 80H
        MOV  [BX], AL
        INC  BX
        LOOP READ_S1
        MOV  BX, 2000H
        MOV  CX, 100
READ_S2: IN  AL, 81H
        TEST AL, 01H
        JNZ  READ_S2
        MOV  AL, BX
        OUT  80H, AL
        INC  BX
        LOOP READ_S1
```

2.



将8255A的D_7~D_0接在数据总线的高8位地址D_{15}~D_8可使接口地址为奇地址口

3. 改为共阳极接法后当 PB7=1 时对应的 LED 管会亮，
由此可得 0～F 的七段代码为

	共阴极	共阳极
0:	0100 0000	→ 0011 1111 → 3FH
1:	0111 1001	→ 0000 0110 → 06H
2:	0010 0100	→ 0101 1011 → 5BH
3:	0011 0000	→ 0100 1111 → 4FH
4:	0001 1001	→ 0110 0110 → 66H
5:	0001 0010	→ 0110 1101 → 6DH
6:	0000 0010	→ 0111 1101 → 7DH
7:	0111 1000	→ 0000 0111 → 07H
8:	0000 0000	→ 0111 1111 → 7FH
9:	0001 1000	→ 0110 0111 → 67H
10:	0000 1000	0111 0111 → 77H
11:	0000 0011	0111 1100 → 7CH
12:	0100 0110	0011 1001 → 39H
13:	0010 0001	0101 1110 → 5EH
14:	0000 0110	0111 1001 → 79H
15:	0000 1110	0111 0001 → 71H

程序应当修改为：

```
DATA  SEGMENT
TABLE DB  3FH, 06H, 5BH, 4FH, 66H, 6DH, 7DH, 07H
          7FH, 67H, 77H, 7CH, 39H, 5EH, 79H, 71H
DATA  ENDS
CODE  SEGMENT
      ASSUME CS:CODE, DS:DATA
      MOV  AL, 90H
      OUT  63, AL
IN_PA: IN  AL, 60H
      AND  AL, 0FH
      MOV  BX, OFFSET TABLE
      XLAT
      OUT  61H, AL
      CALL DELAY
      JMP  IP_PA
DELAY: ...
      MOV  AH, 4CH
      INT  21H
CODE  ENDS
      END
```

4. 闭建C在0行0列，压下后从B口可读得$D_4=0$和$D_3=0$，其余位为1
故其编码为11100111B=E7H

5. 由要求可得控制字为：

10001010

程序为：MOV AL，10001010B
OUT 86H，AL