实验三:8259中断优先级实验

CODE SEGMENT

ASSUME CS:CODE

START:PUSH DS

MOV AX,0000H //设置中断向量

MOV DS,AX

MOV AX,OFFSET MIR6

MOV SI,0038H

MOV [SI],AX

MOV AX,CS

MOV SI,003AH

MOV [SI],AX

MOV AX,OFFSET MIR7

MOV SI,003CH

MOV [SI],AX

MOV AX,CS

MOV SI,003EH

MOV [SI],AX

POP DS

CLI //8259初始化

MOV AL,11H

OUT 20H,AL

MOV AL,08H

OUT 21H,AL

MOV AL,04H

OUT 21H,AL

MOV AL,05H //ICW4设置全嵌套方式

OUT 21H,AL

MOV AL,3FH

OUT 21H,AL

MOV DX,0656H //8255初始化

MOV AL,90H

OUT DX,AL

STI

AA1: MOV AL,0FFH //8255PB口输出

MOV DX,0652H

OUT DX,AL

JMP AA1

MIR6: PUSH AL //保护现场

PUSH DX

PUSH CX

STI //开中断

MOV CX,0FFFFH //考虑到中断嵌套所以把延时改为一直输出灯的状态，以免看不到现象

A1: MOV AL,0FH

MOV DX,0652H

OUT DX,AL

LOOP A1

MOV CX,0FFFFH

A2: MOV AL,0FH

OUT DX,AL

LOOP A2

MOV CX,0FFFFH

A3: MOV AL,0FH

OUT DX,AL

LOOP A3

MOV CX,0FFFFH

A4: MOV AL,0FH

OUT DX,AL

LOOP A4

MOV CX,0FFFFH

MOV AL,20H //设置正常EOI结束中断

OUT 20H,AL

POP CX //恢复现场

POP DX

POP AL

IRET //中断返回

MIR7: PUSH AL //保护现场

PUSH DX

PUSH CX

STI //开中断

MOV CX,0FFFFH

A5: MOV AL,0F0H

MOV DX,0652H

OUT DX,AL

LOOP A5

MOV CX,0FFFFH

A6: MOV AL,0F0H

OUT DX,AL

LOOP A6

MOV CX,0FFFFH

A7: MOV AL,0F0H

OUT DX,AL

LOOP A7

MOV CX,0FFFFH

A8: MOV AL,0F0H

OUT DX,AL

LOOP A8

MOV CX,0FFFFH

A9: MOV AL,0F0H

OUT DX,AL

LOOP A9

MOV CX,0FFFFH

A10: MOV AL,0F0H

OUT DX,AL

LOOP A10

MOV CX,0FFFFH

A11: MOV AL,0F0H

OUT DX,AL

LOOP A11

MOV CX,0FFFFH

A12: MOV AL,0F0H //考虑到IR7可以相应IR6，延时长一些效果更明显

OUT DX,AL

LOOP A12

MOV AL,20H

OUT 20H,AL

POP CX //恢复现场

POP DX

POP AL

IRET

CODE ENDS

END START