```
.MODEL SMALL
.DATA

PA EQU 0D800H
PB EQU 0D801H
PC EQU 0D802H
CW EQU 0D803H

.CODE
MOV AX,@DATA
MOV DS,AX

MOV DX,CW
MOV AL,80H          ;all ports are outputs
OUT DX,AL

MOV DX,PA           ;port A as output for bcd
MOV AL,00H          ;initial value 0

UP:
        OUT DX,AL   ;Display BCD
        CALL DELAY
        INC AL
        DAA                 ;Decimal Adjust after Addition
        CMP AL,00H
JNZ UP

MOV AL,98d

DOWN:
        OUT DX,AL   ;Display BCD
        CALL DELAY
        DEC  AL
        DAS                 ;Decimal Adjust after Subtraction
        CMP AL,99d
JNZ     DOWN

MOV AH,4CH
INT 21H

DELAY PROC NEAR
        MOV SI,0FFFFH
        Outer:
```

```
                MOV DI,0FFFFH
                Inner:
                        DEC DI
                JNZ Inner
                DEC SI
        JNZ Outer
        RET
DELAY ENDP

END
```