

```
.MODEL SMALL  
  
DISPLAY MACRO MSG  
  
    LEA DX,MSG  
  
    MOV AH,09H  
  
    INT 21H  
  
ENDM
```

```
.DATA  
  
N DB 6  
  
A DB 05,07,09,03,01,08  
  
MSG1 DB 0DH,0AH,"1-SORT IN ASCENDING ORDER...$"   
MSG2 DB 0DH,0AH,"2-SORT IN DESCENDING ORDER...$"   
MSG3 DB 0DH,0AH,"3-EXIT$"   
MSG4 DB 0DH,0AH,"ENTER YOUR CHOICE$"   
MSG5 DB 0DH,0AH,"INVALID CHOICE$"
```

```
.CODE  
  
    MOV AX,@DATA  
  
    MOV DS,AX  
  
    LEA SI,A  
  
    MOV CL,N  
  
    DEC CL
```

```
DISPLAY MSG1  
DISPLAY MSG2  
DISPLAY MSG3  
DISPLAY MSG4
```

```
MOV AH,01H  
  
INT 21H  
  
SUB AL,30H
```

```
CMP AL,01H
JE ASCSORT
CMP AL,02H
JE DESCSORT
CMP AL,03H
JE FINAL
DISPLAY MSG5
JMP FINAL
```

```
ASCSORT:MOV CH,CL
        MOV SI,00H
INLOOPA:MOV AL,A[SI]
        INC SI
        CMP AL,A[SI]
        JC NOA
        XCHG AL,A[SI]
        MOV A[SI-1], AL
        NOA: DEC CH
        JNZ INLOOPA
        DEC CL
        JNZ ASCSORT
        JMP FINAL
```

```
DESCSORT:MOV CH,CL
        MOV SI,00H
INLOOPD:MOV AL,A[SI]
        INC SI
        CMP AL,A[SI]
        JC NOD
        XCHG AL,A[SI]
        MOV A[SI-1], AL
```

NOD:DEC CH

JNZ INLOOPD

DEC CL

JNZ DESCSORT

JMP FINAL

FINAL:MOV AH,4CH

INT 21H

END

DOSBox 0.74-3, Cpu speed: max 100% cycles, Frameskip 0, Prog...

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local
source1 CS:IP (ACTIVE)

Address	Disassembly	Comment
052A:0096	06	PUSH ES
052A:0097	0103	ADD Word Ptr [BP+DI],AX
052A:0099	050708	ADD AX,0807
052A:009C	090D	OR Word Ptr [DI],CX
052A:009E	0A31	OR DH,Byte Ptr [BX+DI]
052A:00A0	2D534F	SUB AX,4F53
052A:00A3	52	PUSH DX
052A:00A4	54	PUSH SP

memory1 byte DS:0000 (ACTIVE)

Address	Hex	ASCII
051A:0000	CD 20 FF 9F 00 EA FF FF AD D3 6C 02 CD 03 32 03
051A:0010	CD 03 4B 0A CD 03 FF 04 FF FF FF FF FF FF FF	..K....
051A:0020	FF FF FF FF FF FF FF FF FF FF FF FF 10 05 76 22
051A:0030	A2 01 14 00 18 00 1A 05 FF FF FF FF 00 00 00 00
051A:0040	05 00 00 00 00 00 00 00 00 00 00 00 00 00 00
051A:0050	CD 21 CB 00 00 00 00 00 00 00 00 00 00 00 00	.!
051A:0060	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

command

Address	Hex	ASCII
0533:0000	01 90 B4 4C CD 21 06 01-03 05 07 08 09 0D 0A 31	...L.
0533:0010	2D 53 4F 52 54 20 49 4E-20 41 53 43 45 4E 44 49	-SORT

>S

<F8=Trace> <F10=Step> <F5=Go> <F6=Window> <F3=Display>