

Bubble SORT

.Model Small

display macro MSG
LRA DX, MSG

MOV AH, 09H

INT 9H

ENDM

data

list db 02h, 01h, 34h, 0f4h, 09h, 05h
number EQU \$-LIST

MSG1 DB 0DH, 0AH, 11 1 > SORT in ascending
order "\$"

MSG2 DB 0DH, 0AH, 11 2 >> SORT in descending order
"\$"

MSG3 DB 0DH, 0AH, " 3 => [2 + I S I \$"

MSG4 DB 0DH, 0AH, "INVALID CHOICE ENTERED
THANK YOU"

MSG5 DB 0DH, 0AH, "ENTER THE CHOICE \$"

.CODE

start j MOV AX, @DATA

MOV DS, AX

LEA SI, OFFSET LIST

MOV CH, NUMBER - 1

DISPLAY MSG1

DISPLAY MSG2

DISPLAY MSG3

DISPLAY MSG5

MOV DA, 01H

INT 9H

SUB AL, 00H

CMP AL, 01H

JMP ASORT

TEMP AL, 09H

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    JMP DSORT
    CMP AL, 03H
    JC final
    DISPLAY MSG 7
    JMP final
ASORT: MOV -BL, 00H
AGAIN: MOV SI, OFFSET LIST
    MOV CL, 00H
    MOV BH, CH
    SUB bh, bh
NPASS: CMP CC, BA
    JNG NEXT
    MOV AL, [SI]
    MOV BP, 01H
    CMP AL, DS:[BP][SI]
    JC NOPE
    XCHG [SI], AL
    XCHG [SI], AL
    NOPE: INC CL
    INC SI
    JMP NPASS
    NEXT: INC BC
    CMP BL, CH
    JC AGAIN
    JMP FINAL
DSORT: MOV -BL, 00H
AGAIN: MOV SI, OFFSET
    MOV CL, 00H
    MOV BH, CH
    SUB BH, BC
    NPASS: CMP CC, BH
    JNG NEXT
    MOV ML, [SI]
    MOV BP, 01H

```

CMP AL, DS:[BP][ESI]

JNC NOPE

XCHG AL, [ESI+1]

XCHG [ESI], AL

NOPE 1; NCCL

INC SI

JMP NPASS

NEXT 1; INC BL

CMP BL, LH

JC AGAIN 1

FINAC : MOV AH, 4CH

INT 01H

END START