

Bubble sort

model small

```
display macro msg  
    lea dx, msg  
    mov ah, 09h  
    int 21h
```

endm

data

~~data~~ n db 5

a db 05, 07, 04, 03, 06

msg 1 db 0dh, 0ah, "1 >> SORT IN ASCENDING"

msg 2 db 0dh, 0ah, "2 >> SORT IN DESCENDING"

msg 3 db 0dh, 0ah, "3 >> EXIT"

msg 4 db 0dh, 0ah, "Enter your choice"

msg 5 db 0dh, 0ah, "Invalid choice"

code

mov ax, @data

mov ds, ax

display msg 1

display msg 2

display msg 3

display msg 4

mov ah, 01h

int 21h

~~sub al, 02h~~

~~jc descsort~~

~~su~~

sub al, 30h

cmp al, 01h

je ascsort

cmp al, 02h

je desxor

cmp al, 03h

je final

display msgs

jmp final

ascsort:

mov cl, n

dec cl

outloop: mov ch, cl

mov si, 00h

inloop: mov al, a[si]

inc si

cmp al, a[si]

je noexch

xchg al, a[si]

mov a[si-1], al

noexch: dec ch

jnz inloop

dec cl

jnz outloop

jmp final

dessor:

mov cl, n

dec cl

outloop1: mov ch, cl

mov si, 00h

inloop1: mov al, a[si]

inc si

cmp al, a[si]

jnc ~~noencl~~ noencl1

xchg al, a[si]

mov a[si-1], al

noencl1: dec ch

jnz inloop1

dec cl

jnz outloop1

jmp final

final: mov ah, 4ch

int 21h

end