

Bubble sort.

model small

data

n dw 5

a dw 05, 07, 04, 03, 06

code

mov ax, @data

mov DS, ax

mov cx, n

dec cx

outloop: mov ch, cx

mov SI, 00h

inloop: mov al, a[SI]

inc SI

cmp al, a[SI]

JC noexch

xchg al, a[SI]

mov a[SI-1], al

noexch: Dec ch

Inc inloop

Dec cx

JNC outloop

mov ah, 4ch

Int 21h

end.

The screenshot shows the DOS DEBUG program interface. At the top, there are menu options: File, Edit, View, Search, Run, Watch, Options, and Calls. The 'Local' window displays assembly code with the following instructions:

Address	Disassembly	Comment
0520:0020	B44C	MOV AH,4C
0520:002D	CD21	INT 21
0520:002F	00B5	ADD Byte Ptr [011],AL
0520:0031	050204	ADD AX,0402
0520:0034	03062000	ADD AX,Word Ptr [0020]
0520:0038	D89782	CALL 8202
0520:003B	C706E6012000	MOV Word Ptr [01E6],0020
0520:0041	06	PUSH ES
0520:0042	BE06E401	MOV ES,Word Ptr [01E4]
0520:0046	268B162C00	MOV DX,Word Ptr ES:[002C]
0520:004B	D07D82	CALL 82C9
0520:004E	1F92	MOV BH,92
0520:0050	B9FF7F	MOV CX,7FFF
0520:0053	D02000	MOV AX,0020
0520:0056	D87982	CALL 82D2
0520:0059	07	POP ES

Below the assembly code, the 'Registers' window shows the following values:

Register	Value
AX	4C05
CX	0000
DX	0000
SI	0000
DI	0000
BP	0000
SP	0000
IP	002F
FL	0207

At the bottom, the 'Memory' window shows the following data:

Address	Value
0520:0000	05 05 07 04 03 06 20 00
0520:0010	00 06 8E 06 24 01 26 8B 16 2C 00 E8 7D 02 B7 92

The status bar at the bottom indicates: (F8)=Trace (F10)=Step (F5)=Go (F6)=Window (F3)=Display.