

ASCENDING ORDER

MODEL SMALL

.DATA

W DB 5

A DB 05H, 07H, 04H, 03H, 06H

.CODE

MOV AX, @DATA

MOV DS, AX

MOV CL, N

DEC CL

OUTLOOP: MOV CH, CL

MOV SI, 00H

IN LOOP: MOV AL, A[SI]

INC SI

CMP AL, A[SI]

JL NOEXCH

XCHG AL, A[SI]

MOV A[SI-1], AL

NOEXCH: DEC CH

JNZ INLOOP

DEC CL

JNZ OUTLOOP

MOV AH, 4CH

INT 21H

END

BUBBLE SORT WITH MENU DRIVEN

.MODEL SMALL

DISPLAY MACRO MSG

LEA DX, MSG

MOV AH, 09H

INT 21H

ENDM

.DATA

LIST DB 02H, 01H, 034H, 0F4H, 09H, 05H

NUMBER EQU \$-LIST

MSG 1 DB 0DH, 0AH, "1>> SORT IN ASCENDING ORDER \$"

MSG 2 DB 0DH, 0AH, "2>> SORT IN DESCENDING ORDER \$"

MSG 3 DB 0DH, 0AH, "3>> EXIT \$"

MSG 4 DB 0DH, 0AH, "ENTER CHOICE: \$"

MSG 5 DB 0DH, 0AH, "INVALID CHOICE ENTERED \$"

.CODE

START: ~~MOV~~ MOV AX, @DATA

MOV DS, AX

LEASI, LIST

MOV CH, NUMBER/2

DISPLAY MSG 1

DISPLAY MSG 2

DISPLAY MSG 3

DISPLAY MSG 4

MOV AH, 01H

INT 21H

SUB AL, 30H

CMP AL, 01H

JE ASCSORT

CMP AL, 02H

JE DESSORT

CMP AL, 03H

JE FINAL

DISPLAY MSG 5

5MP FINAL

A SORT : MOV BL, 00H

AGAIN : MOV SI, OFFSET LIST

MOV CL, 00H

MOV BH, CH

SUB BH, BL

NPASS : CMP CL, BH

JNC NEXT

MOV AL, [ESI]

MOV BP, 01H

CMP AL, DS: [BP][ESI]

JC _NOPE

XCHG AL, [ESI+1]

XCHG [ESI], AL

_NOPE : INC CL

INC SI

JMP NPASS

NEXT : INC BL

CMP BL, CH

JC ~~AGAIN~~ AGAIN

JMP FINAL

DE SORT : MOV BL, 00H

AGAIN I: MOV SI, OFFSET LIST

MOV CL, 00H

MOV BH, CH

SUB BH, BL

NPASS I: CMP CL, BH

JNC NEXT

MOV AL, [ESI]

MOV BP, 01H

CMP AL, DS: [BP][ESI]

JNC - NOPE1

XCHG AL, [ESI+2]

XCHG [ESI], AL

-NOPE1: INC CL

INC SI

JMP NPASS1

NEXT1: INC BL

CMPP BL, CH

JL AGAIN1

FINAL: MOV AH, 4CH

INT 21H

END START