

BUBBLE SORT WITH MENU DRIVEN

.MODEL SMALL

DISPLAY MACRO MSG

LEA DX, MSG

MOV AH, 09H

INT 21H

ENDM

.DATA

LIST DB 02H, 01H, 03H, 04H, 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

JMP 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, [SI]

MOV BP, 01H

CMP AL, DS: [BP][SI]

JC NOPE

XCHG AL, [SI+1]

XCHG [SI], AL

NOPE : INC CL

INC SI

JMP NPASS

NEXT : INC BL

CMP BL, CH

JC ~~AGAIN~~ AGAIN

JMP FINAL

DESSORT : 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, [SI]

MOV BP, 01H

CMP AL, DS: [BP][SI]

JNC - NOPE1

XCHG AL, [SI+2]

XCHG [SI], AL

-NOPE1: INC CL

INC SI

JMP NPASS1

NEXT2: INC BL

CMPP BL, CH

JL AGAIN2

FINAL: MOV AX, 4CH

INT 21H

BND START