

LAB-2

Bubble sort

• MODEL SMALL

DISPLAY MACRO MSG

LEA DX, MSG

MOV AH, 09H

INT 21H

ENDM

• DATA

LIST DB 02H, 01H, 34H, 0F4H, 09H, 05H

NUMBER EQU \$-LIST

MSG1 DB 0DH, 0AH

MSG2 DB 0DH, 0AH

MSG3 DB 0DH, 0AH

MSG4 DB 0DH, 0AH

MSG5 DB 0DH, 0AH

• CODE

START: MOV AX, @DATA

MOV DS, AX

LEA SI, LIST

MOV CH, NUMBER-1

•

DISPLAY MSG1

DISPLAY MSG2

DISPLAY MSG3

DISPLAY MSG4

MOV AH, 01H

INT 21H

SUB AL, 30H

CMP AL, 01H

JE ASCSORT

CMP AL, 02H

JE DESSORT

CMP AL, 03H

JE FINAL

DISPLAY MSG5

JMP FINAL

~~ASC SORT~~

ASC 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][SE]

JC NOPE

XCHG AL, [SI+1]

XCHG [SI], AL

~~NOPE~~

NOPE: INC CL

INC SI

JMP NPASS

NEXT: INC BL

CMP BL, CH

JC AGAIN

JMP FINAL

DESSERT: MOV BL, 00H

AGAIN: MOV SI, OFFSET LIST

MOV CL, 00H

MOV BH, CH

SUB BH, BL

NPASS 1: CMP CL, BH

JNC NEXT

MOV AL, [SI]

MOV BP, DIH

CMP AL, DS:[BP][SI]

JNC _NOPE1

XCHG AL, [SI+1]

XCHG [SI], AL

— NOPE1 : INC EL

INC SE

NEXT 1 : INC BL

IMP BL, CH

JC AGAIN1

FINAL : MOV AH, 4CH

INT 21H

END START