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USN: 1BM19CS137

BATCH 2

• 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, "1 >> SORT IN ASCENDING ORDER \$"

MSG2 DB 0DH, 0AH, "2 >> SORT IN DESCENDING ORDER \$"

MSG3 DB 0DH, 0AH, "3 >> EXIT \$"

MSG4 DB 0DH, 0AH, "ENTER YOUR CHOICE :: \$"

MSG5 DB 0DH, 0AH, "INVALID CHOICE ENTERED \$"

• 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

Page No: _____
Date: ____/____/____

CMP AL, 01H

JE ASCSORT

CMP AL, 02H

JE DSSORT

~~CMP~~ CMP AL, 03H

JE FINAL

DISPLAY MSGS

JMP FINAL

ASCSORT:

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

JMP FINAL

DESSORT: MOV BL, 00H

AGAIN1: MOV SI, OFFSET LIST

MOV CL, 00H

MOV, BH, CH

SUB BH, BL

NIPASS1: CMP CL, BH

JNC NEXT

MOV AL, [SI]

MOV, BP, 01H

CMP AL, DS:[BP][SI]

JNC -NOPE1

XCHG AL, [SI+1]

XCHG [SI], AL

-NOPE1: INC CL

INC SI

JMP NPASS1

NEXT: INC BL

CMP BL, CH

JC AGAIN1

FINAL: MOV AH, 4CH

INT 21H

~~END~~ START

GMD

Bubble Sort program

SENDING

MODEL SMALL

DATA

n db 5

a db 05, 07, 04, 03, 06

CODE

MOV AX, @data

MOV DS, AX

MOV CL, N

dec CL

OUTLOOP: MOV CH, CL

MOV SI, 00h

INLOOP: MOV AL, a[SI]

INC SI

cmp AL, a[SI]

jc

~~jnc~~ NOEXCH

xchg AL, a[SI]

MOV a[SI-1], AL

NOEXCH: DEC CH

JNZ INLOOP

DEC CL

JNZ OUTLOOP

MOV AH, 9CH

INT 21H

END