

EXPERIMENT N0-7

AIM: Write an ALP to arrange numbers in ascending order

CODE:

DATA SEGMENT

MSG1 DB 0DH,0AH,"ENTER A NUMBER : \$"

MSG2 DB 0AH,0DH,"NUMBER IN ASCENDING ORDER IS : \$"

A DB 10 DUP("\$")

DATA ENDS

CODE SEGMENT

ASSUME DS:DATA,CS:CODE

START: MOV AX,DATA

 MOV DS,AX

 MOV CX,05H

 MOV BX,00H

UP:

 MOV DX,OFFSET MSG1

 MOV AH,09H

 INT 21H

 MOV AH,01H ;accept input from user

 INT 21H

 MOV [A+BX],AL

 INC BX

 DEC CX

 JNZ UP ;keeps accepting

 MOV CX,05H

 LOOP1:

 MOV DX,04H

MOV BX,00H

LOOP2:

MOV AL,[A+BX]

CMP AL,[A+BX+1]

JGE ABOVE

CONT:

INC BX

DEC DX

JNZ LOOP2

DEC CX

JNZ LOOP1

JMP LAST

ABOVE:

MOV AL,[A+BX+1]

XCHG [A+BX],AL

MOV [A+BX+1],AL

JMP CONT

LAST:

MOV CL,05H

MOV BX,00H

MOV DX,OFFSET MSG2

MOV AH,09H

INT 21H

MOV DX,00H

LOOP3:

MOV DL,[A+BX]

MOV AH,02H

INT 21H

INC BX

DEC CL

JNZ LOOP3

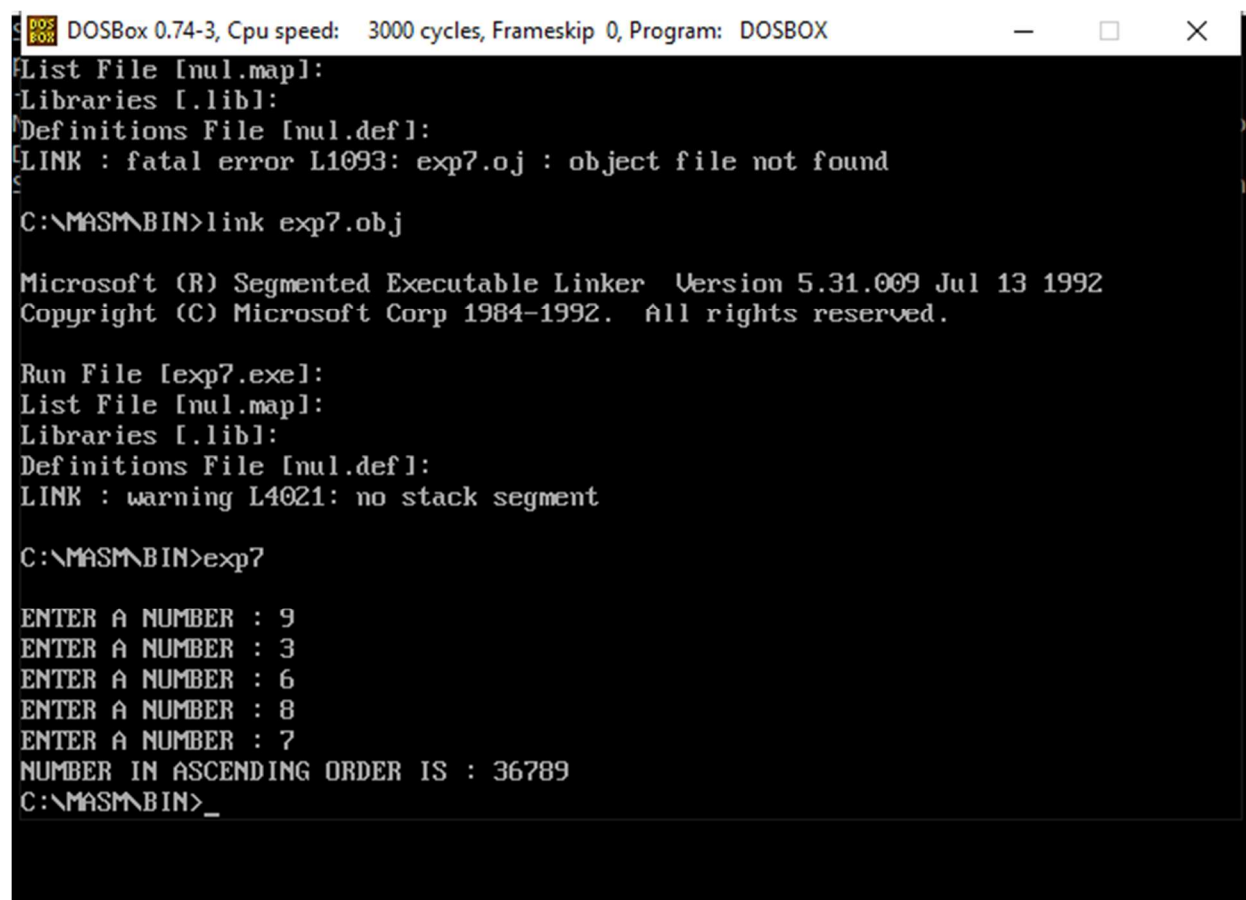
MOV AH,4CH

INT 21H

CODE ENDS

END START

OUTPUT:



```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
List File [nul.map]:
Libraries [.lib]:
Definitions File [nul.def]:
LINK : fatal error L1093: exp7.obj : object file not found

C:\MASM\BIN>link exp7.obj

Microsoft (R) Segmented Executable Linker Version 5.31.009 Jul 13 1992
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Run File [exp7.exe]:
List File [nul.map]:
Libraries [.lib]:
Definitions File [nul.def]:
LINK : warning L4021: no stack segment

C:\MASM\BIN>exp7

ENTER A NUMBER : 9
ENTER A NUMBER : 3
ENTER A NUMBER : 6
ENTER A NUMBER : 8
ENTER A NUMBER : 7
NUMBER IN ASCENDING ORDER IS : 36789
C:\MASM\BIN>_
```