

```
.MODEL SMALL
DISPLAY MACRO MSG
    LEA DX, MSG
    MOV AH, 09H
    INT 21H
ENDM

. DATA
LIST DB 01H, 05H, 07H, 10H, 12H, 14H
NUMBER EQU ($-LIST)
KEY DB 012H
MSG1 DB 0DH, 0AH, "ELEMENT FOUND IN THE LIST--$"
MSG2 DB 0DH, 0AH, "SEARCH FAILED!! ELEMENT NOT FOUND IN THE LIST $"

. CODE
START: MOV AX, @DATA
        MOV DS, AX

        MOV CH, NUMBER-1
        MOV CL, 00H
AGAIN:  MOV SI, OFFSET LIST
        XOR AX, AX
        CMP CL, CH
        JE NEXT
        JNC FAILED
NEXT:   MOV AL, CL
        ADD AL, CH
        SHR AL, 01H
        MOV BL, AL
        XOR AH, AH
        MOV BP, AX
        MOV AL, DS: (BP)[SI]
        CMP AL, KEY
        JE SUCCESS
        JC INCLW
```

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1BML9CS135

MOV CH, BL

DEC CH

JMP AGAIN

INCLOW: MOV CL, BL

INC CL

JMP AGAIN

SUCCESS: DISPLAY MSG 1

JMP FINAL

FAILED: DISPLAY MSG 2

FINAL: MOV AH, 4CH

END START

DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

File Edit Search View Options Help

C:\MASMLAB-1.ASM

```
.MODEL SMALL
; MACRO TO DISPLAY THE MESSAGE...
DISPLAY MACRO MSG
    LEA DX, MSG
    MOV AH, 09H
    INT 21H
ENDM

.DATA
LIST DB 01H, 05H, 07H, 10H, 12H, 14H
NUMBER EQU ($-LIST)
KEY DB 012H
MSG1 DB 0DH, "ELEMENT FOUND IN LIST....$"
MSG2 DB 0DH, "SSEARCH FAILED! ELEMENT NOT FOUND IN THE LIST $"

.CODE
START : MOV AX, @DATA
        MOV DS, AX
        MOV CH, NUMBER-1
        MOV CL, 00H
AGAIN : MOV SI, OFFSET LIST
```

F1=Help | Line:1 Col:1



DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

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C:\MASMLAB-1.ASM

```
AGAIN : MOV SI, OFFSET LIST
        XOR AX, AX
        CMP CL, CH
        JE NEXT
        JNC FAILED
NEXT :   MOV AL, CL
        ADD AL, CH
        SHR AL, 01H
        MOV BL, AL
        XOR AH, AH
        MOV BP, AX
        MOV AL, DS:[BP][SI]
        CMP AL, KEY
        JE SUCCESS
        JC INCLOW
        MOV CH, BL
        DEC CH
        JMP AGAIN
INCLOW: MOV CL, BL
        INC CL
        JMP AGAIN
SUCCESS: DISPLAY MSG1
```

F1=Help | Line:43 Col:1

DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: EDIT

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C:\MASMLAB-1.ASM

```
MOV BL, AL
XOR AH, AH
MOV BP, AX
MOV AL, DS:[BP][SI]
CMP AL, KEY
JE SUCCESS
JC INCLOW
MOV CH, BL
DEC CH
JMP AGAIN
INCLOW: MOV CL, BL
INC CL
JMP AGAIN
SUCCESS: DISPLAY MSG1
JMP FINAL
FAILED: DISPLAY MSG1
FINAL: MOV AH, 4CH
INT 21H
END START
```

F1=Help | Line:51 Col:1

```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX - [X]
0 Warning Errors
1 Severe Errors

C:\MASM>edit lab-1.asm

C:\MASM>MASM LAB-1;;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51478 + 465066 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\MASM>LINK LAB-1;;

Microsoft (R) Overlay Linker Version 3.60
Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

LINK : warning L4021: no stack segment

C:\MASM>LAB-1
ELEMENT FOUND IN LIST....
C:\MASM>_
```