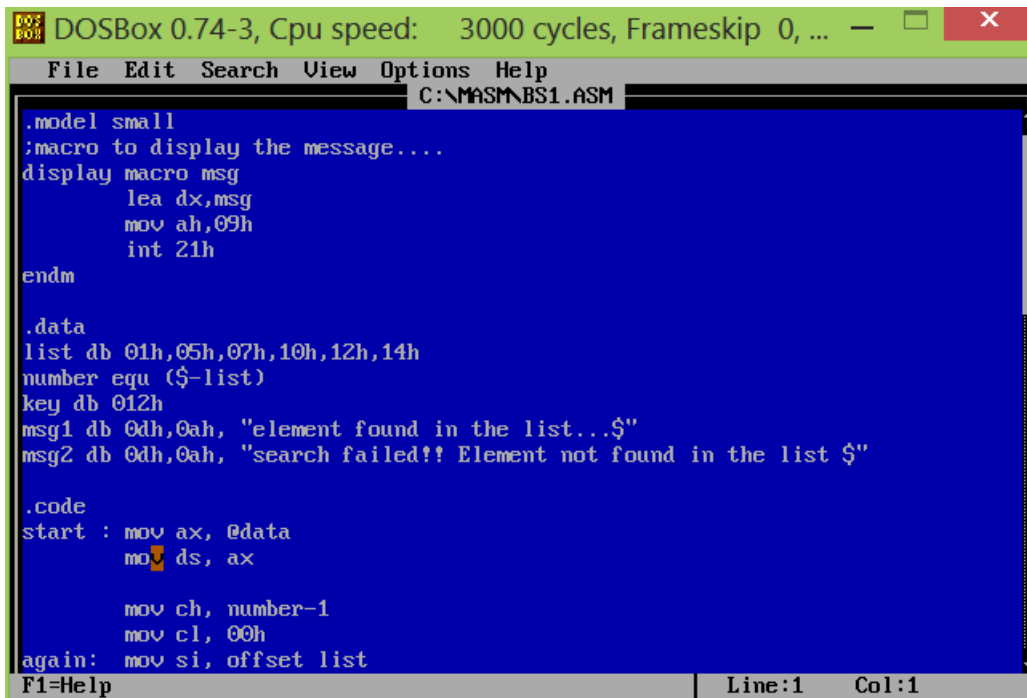


## BINARY SEARCH (RAVI SAJJANAR):



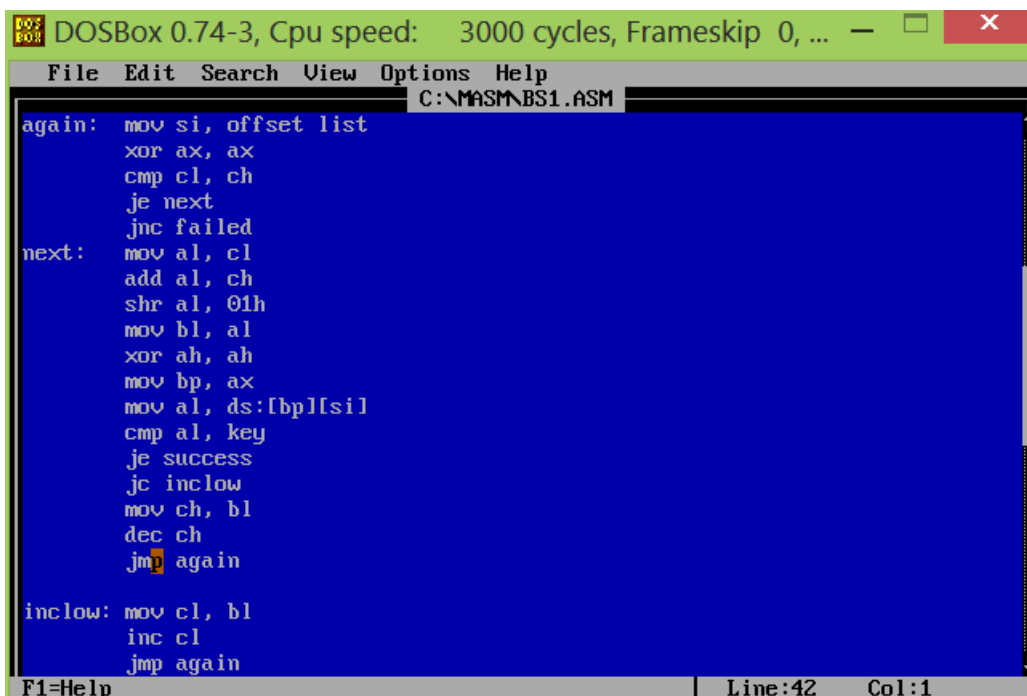
```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, ...
File Edit Search View Options Help
C:\MASM\BS1.ASM

.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 ($-list)
key db 012h
msg1 db 0dh,0ah, "element found in the list...$"
msg2 db 0dh,0ah, "search failed!! Element not found in the list $"

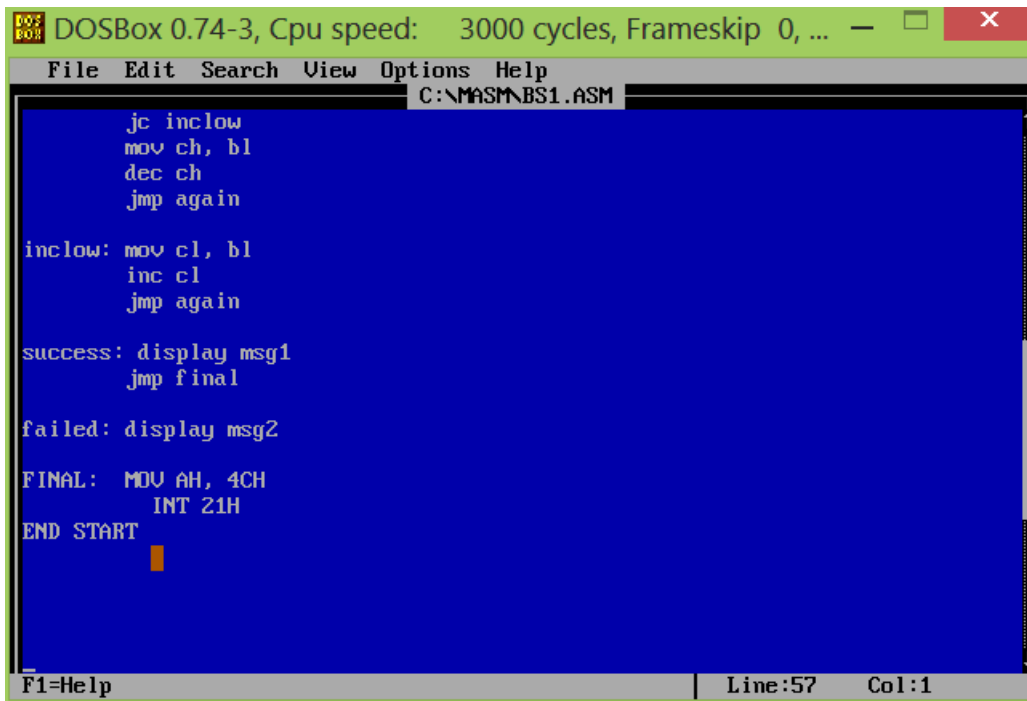
.code
start : mov ax, @data
        mov ds, ax

        mov ch, number-1
        mov cl, 00h
again:  mov si, offset list
```



```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, ...
File Edit Search View Options Help
C:\MASM\BS1.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 inclo
        mov ch, bl
        dec ch
        jmp again
inclo:  mov cl, bl
        inc cl
        jmp again
```



```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, ...
File Edit Search View Options Help
C:\MASM\BS1.ASM

        jc incow
        mov ch, bl
        dec ch
        jmp again

incow:   mov cl, bl
        inc cl
        jmp again

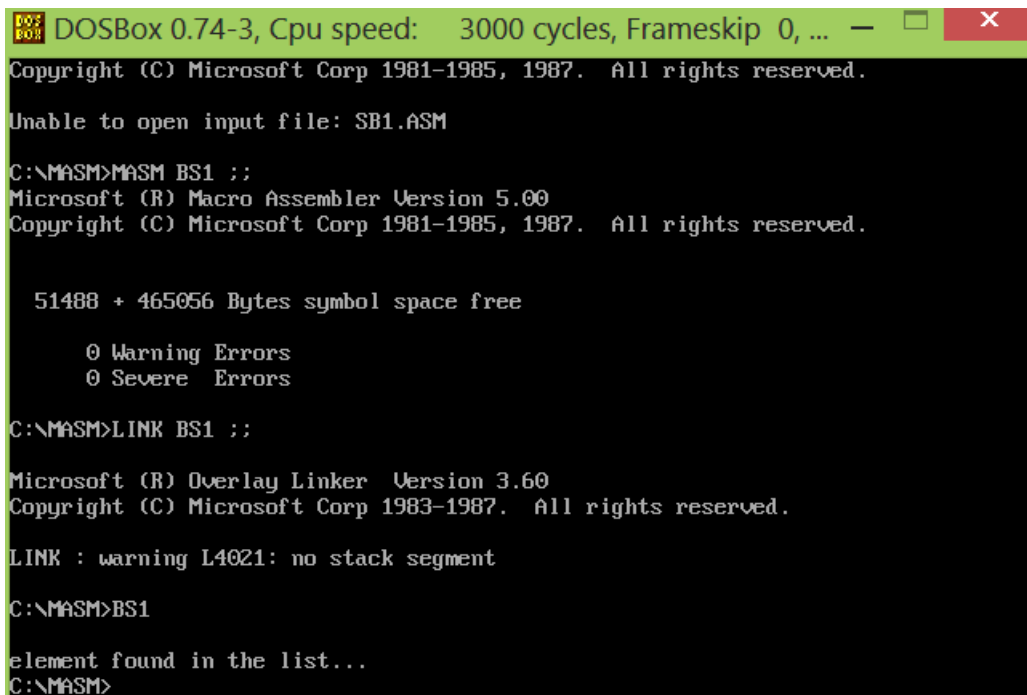
success: display msg1
        jmp final

failed:  display msg2

FINAL:   MOV AH, 4CH
        INT 21H
END START
```

F1=Help | Line:57 Col:1

## OUTPUT:



```
DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, ...
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

Unable to open input file: SB1.ASM

C:\MASM>MASM BS1 ;;
Microsoft (R) Macro Assembler Version 5.00
Copyright (C) Microsoft Corp 1981-1985, 1987. All rights reserved.

51488 + 465056 Bytes symbol space free

0 Warning Errors
0 Severe Errors

C:\MASM>LINK BS1 ;;

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

LINK : warning L4021: no stack segment

C:\MASM>BS1

element found in the list...
C:\MASM>_
```

DOSBox 0.74-3, Cpu speed: max 100% cycles, Frameskip ...

FileEditViewSearchRunWatchOptionsCallsHelp

source1 CS:IP (ACTIVE)

052A:0037 8D161500 LEA DX,Word Ptr [0015]

052A:003B B409 MOV AH,09

052A:003D CD21 INT 21

052A:003F EB09 JMP 004A

052A:0041 90 NOP

052A:0042 8D163400 LEA DX,Word Ptr [0034]

052A:0046 B409 MOV AH,09

052A:0048 CD21 INT 21

052A:004A B44C MOV AH,4C

052A:004C CD21 INT 21

052A:004E 0105 ADD Word Ptr [DI],AX

052A:0050 07 POP ES

052A:0051 1012 ADC Byte Ptr [BP+SI],DL

052A:0053 1412 ADC AL,12

052A:0055 0D0A65 OR AX,650A

052A:0058 6C INSB

reg

AX = 4C12

BX = 0004

CX = 0503

DX = 0015

SP = 0000

BP = 0004

SI = 000E

DI = 0000

DS = 052E

ES = 051A

SS = 0529

CS = 052A

IP = 004E

FL = 0246

NV UP EI PL

ZR NA PE NC

command

052E:0000 09 90 8D 16 34 00 B4 09-CD 21 B4 4C CD 21 01 05 ....4

052E:0010 07 10 12 14 12 0D 0A 65-6C 65 6D 65 6E 74 20 66 ..... DS:0000

052E:0020 6F 75 6E 64 20 69 6E 20-74 68 65 20 6C 69 73 74 ound 9009

<F8=Trace> <F10=Step> <F5=Go> <F6=Window> <F3=Display>