```
BINARY SEARCH.
.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   ;  High value
        mov  cl, 00H        ;  low value
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          ;  DIVIDE BY 2
        MOV  BL, AL
        XOR  AH, AH           ;  CLEAR AH
        MOV  BP, AX
        MOV  AL, DS:[BP][SI]
        CMP  AL, KEY ;  COMPAR KEY AND A[I]
        JE   SUCCESS   ; IF EQUAL, Display success message
```

```
            JL  INCLOW
            MOV CH, BL        ; if KEY >A[I] SHIFT HIGH
            DEC CH
            JMP AGAIN
INCLOW: MOV CL, BL            ; if key < A[I] SHIFT
            INC CL                                     LOW
            Jmp Again
SUCCESS: DISPLAY MSG 1
            JMP FINAL
FAILED: DISPLAY MSG 2    ;  JOB OVER  TERMINATE....
FINAL: MOV AH, 4CH
            INT 21H
END START.
```

```
            0 Warning Errors
            3 Severe  Errors

C:\MP_LAB\MASM>masm binsea;;
Microsoft (R) Macro Assembler Version 5.00
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    51468 + 465076 Bytes symbol space free

        0 Warning Errors
        0 Severe  Errors

C:\MP_LAB\MASM>link binsea;;

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LINK : warning L4021: no stack segment

C:\MP_LAB\MASM>cv binsea

ELEMENT FOUND IN THE LIST ...
C:\MP_LAB\MASM>_
```