```asm
Lab1 :
.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 10H
MSG1 DB  ODH , OAH , "Element found in the
                        list  $ "
MSG2 DB ODH , OAH , "Search failed!!
                      Element not found in
                      the list $ "
.Code
Start : Mov Ax, @Data
        mov DS, AX
        mov CH, Number-1 ; high value...
        mov CL, OOH      ; Low value...
AGAIN : mov SI , OFFSET LIST
        XOR AX , AX
```

```
CMP CL, OCH
JE NEXT
NEXT : MOV AL, CL
        ADD AL, CH
        SHR AL, O1H
        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 MSG2
FINAL : MOV AH, 4CH
        INT 21H
END START
```