lab experiment 2 : Binary Search

```
. 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 ($-LIST)
   KEY DB  12H
   MSG1  DB   0DH, 0AH, "ELEMENT FOUND IN THE LIST...$"
   MSG 2  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    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
```