first lab program (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 ,0aH ,14H
NUMBER  EQU   ($- LIST).
KEY     DB    012H
MSG1   DB   0DH ,0AH , " Element founded 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, NUMB - 1    ; High Level
         MOV  CL, 00H



AGAIN    MOV  SI, OFFSET LIST
```

Date ___/___/___

```
XOR    AX, AX        ; CL<CH  or CH<CL
CMP    CL,CH                or CL=CH

                     ; CF=1    ; CF=0 ZF=1


JE  NEXT
JNC  FAILED


NEXT:   MOV   AL, CL
        ADD   AL, CH
        SHR   AL, 01H        ; DIVIDE By 2
        MOV   BL, AL
        XOR   AH, AH         ; CLEA AH
        MOV   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


SUCESSS   DISPLAY MSG1
          JMP FINAL


FAILED    DISPLAY MSG2
FINAL     MOV AH, 4CH
          INT 21H
```