

## LAB1: 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 10H

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

XOR AX, AX

CMP CL, CH

JE NEXT

JNC FAILED

```
NEXT : MOV SI, CL
        ADD AL, CH
        SHR AL, CLH
        MOV BL, AL
        XOR AH, AH
        MOV BP, AX
        MOV AL, DS:[BP][SI]
        CMP AL, KEY
        JE SUCCESS
        JC INGLLOW
        MOV CH, BL
        DEC CH
        JMP AGAIN
```

```
INGLOW : MOV CL, BL
          INC CL
          JMP AGAIN
```

```
SUCCESS : DISPLAY MSG1
           JMP FINAL
```

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

```
END START
```