

Lab Program

• 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, ^{ec} ELEMENT FOUND IN THE
LIST...\$"

MSG2 DB 0DH, 0AH, ^{ec} 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

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MOV BP, AX
MOV AL, DB: [BP][SI]
CMP AL, KEY ; Compare key & A[SI]
JE SUCCESS ; If equal, display success msg.
JC INCLW ; If KEY > A[SI] shift high
MOV CH, BL
DEC CH
JMP AGAIN
INCLW: MOV CL, BL ; If KEY < A[SI] shift low.
INC CL
JMP AGAIN
SUCCESS: DISPLAY MSG1
JMP FINAL
FAILED: DISPLAY MSG2 ; Job over, terminate
FINAL: MOV AH, 4CH
INT 21H
END START.
```