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18MCA201

Date

No.

• MODEL SMALL

; MACRO TO DISPLAY MESSAGE

DISPLAY MACRO MSG

LEA DX, MSG

MOV AH, 09H

INT 21H

ENDM

• DATA

LIST DB 01H, 07H, 10H, 12H, 14H

NUMBER EQU (\$-LIST) ; no here is having value 6

KEY DB 10H

MSG1 DB 0DH, 0AH, "ELEMENT FOUND IN LIST"

MSG2 DB 0DH, 0AH, "SEARCH FAILED! NOT FOUND"

• CODE

START : MOV AX, @DATA

MOV DS, AX

MOV CH, NUMBER-1 ; HIGH Value 6-1=5

MOV CL, 0DH ; Low Value ...

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~~DATA~~

~~LAST DD~~

AGAIN: MOV SI, OFFSET LIST ; LEA SI, LIST
XOR AX, AX ; MOV AX, 00H
CMP CL, CH ; SUBTRACTION OF CL-CH
JE NEXT
JNC FAILED

NEXT: MOV AL, CL ; AL = 00H
ADD AL, CH ; AL = 00 + 05 = 05
SHR AL, 01H ; DIVIDE BX 2 → AL ^{Index} - midpoint
MOV BL, AL ; BL → Index of mid element
XOR AH, AH ; CLEAR AH
MOV BP, AX
MOV AL, DS: [BP] [SI]
CMP AL, KEY ; Compare Key and AL
JE SUCCESS ; IF EQUAL, DISPLAY
JL INCLW SUCCESS MSG

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