

.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) ; number here is having

KEY DB 10H

MSG1 DB 0DH,0AH, "ELE FOUND IN THE LIST.... \$"

MSG2 DB 0DH,0AH, "ELE NOT FOUND IN THE LIST \$"

.CODE

START: MOV AX,@DATA

MOV DS,AX

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

MOV CL,00H ; LOW VALUE

AGAIN: MOV SI,OFFSET LIST

XOR AX,AX

CMP CL,CH

JE NEXT

JNC FAILED

↑ ; LEA SI,LIST
↑ ; MOV AX,00H

NEXT: MOV AL,CL ; AL=00H

ADD AL,CH ; AL=00+05=05

SHR AL,01H

; DIV BY 2 --> AL will have the index of mid ele

MOV BL,AL

; BL → index of mid ele

XOR AH,AH

; clear AH

MOV BP,AX

MOV AL,DS:[BP][SI]

CMP AL,KEY

JE SUCCESS

JL INLOW

↑ ; compare key and A[1]
↑ ; If equal, Display success msg

MOV CH,BL

; If key > A[1] shift high

DEC CH

; CH will have index of mid-1 ele (Search from low to mid-1)

JMP AGAIN

INLOW: MOV CL,BL

INC CL

; CL will have index of mid +1 ele (search from mid+1 to high)

JMP AGAIN

FAILED : DISPLAY MSH2

FINAL : MOV AH, 4CH

INT 21H

END START