

BINARY SEARCH

DATE 12/10/2020

NAME S SKANDA

USN: IBM19CS137

•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, "ELEMENT FOUND IN THE LIST...\$"

MSG2 DB 0DH, 0AH, "SEARCH FAILED! ELEMENT NOT FOUND...\$"

•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

MOV BL, AL

XOR AH, 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

SUCCESS: DISPLAY MSG1

JMP FINAL

FAILED: DISPLAY MSG2

FINAL: MOV AH, 4CH

INT 21H

END START