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IBM19CS200
3D

Lab 1

Program : Assembly Language Program to Search a
key element in a list of n Number using the
binary search algorithm

. Model Small
Display macro msg
   LEA   DX ,MSG
   MOV   AH, 09H
   INT 21H

. DATA
List DB 0IH , 05H , 07H , 10H, 12H ,14H
NUMBER EQU ($ -LIST)
  KEY RB 0IH , 05H , 07H, 10H, 12H ,14H
NUMBER EQU ($ -LIST)
  KEY DB 0IIH
msG DB 0DH , 0AH , " Element found in the list,, $ "
MGG DB 0DH , 0AH , " Soach failed 1 1 Element not found in
                       the list $ "

, code
Start : MOV AX ,@data
     Mov DS ,AX
     MOV CH , NUMBER — 1 ; Anarlt
     Mov CL , 00H ;
AGIAW : MOV SI, OFFSET LIST
     XOR AX, AX
     CMP CL, CH
     JE NEXT

```asm
        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
FANAL : MOV AH, 4CH
END SEG INT 2H
        END START
```