

(Q1) Binary Search.

• 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, "Element found in list..."

MSG2 DB 0DH, "Search failed!! Element
not found in the list"

• CODE

Start: MOV ~~AX~~^{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, AX : Clear AH

~~MOV BP, AX~~

~~MOV~~

MOV BP, AX

MOV AL, DS:[BP][SI]

CMP AL, KEY ; cmp key and A[1]

JE SUCCESS

JC Inlow

MOV CH, BL ; if key > A[1] Shift high

DEC CH

JMP Again

Inlow : MOV CL, BL ; if key < A[1] 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