

LAB 3

1) .model small
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 list\$"

msg2 db 0dh, 0ah, "search failed!! element
not found in the list\$"

.code

start:

mov ax, @data

mov ds, ax

mov ch, number-1 ; high value

mov cl, 00h ; low value

again1: mov si, offset list

xor ax, ax

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

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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 unclow
        mov ch, bl
        dec ch
        jmp again
        xor ah, ah
        mov bp, ax
        mov al, ds:[bp][si]
        cmp al, key
        je success
        jc unclow
        mov ch, bl
        dec ch
        jmp again

```

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unclow:  mov cl, bl
        inc cl
        jmp again

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Success:  display msg1
        jmp final

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failed:   display msg2
final:    mov ah, 4ch
          int 21h

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End start