MP Lab 3 Programs – Binary Search

```
        . 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 the 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...
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 sucess
        jc inclow
        mov ch, bl
        dec ch
        jump again
inclow:  mov cl, bl
        in cl
        jump again
sucess:  display msg1
        jump final
failed:  display msg 2
final:   mov ah, 4ch
            int 21h
    end Start.
```