

## Binary Search.

- model small

display macro msg

lea dx, msg

mov ah, 09H

int 21H

- data

LIST db 01H, 05H, 07H, 10H, 12H, 14H

NUMBER equ (\$ - LIST)

KEY db 012H

msg1 db 0ah, 0ah, "Element found \$"

msg2 db 0ah, 0ah, "Search failed \$"

- code

Start: mov ax, @data

mov ds, ax

mov ch, NUMBER-1

mov cl, 00H

again: lea si, LIST

mov ax, 00H

cmp cl, ch

je next

jnc fail

next: mov al, cl

add al, ch



```

shel al, DIH
mov bl, al
mov ah, 00H
mov bp, ax
mov al, ds:[bp][si]
cmp al, key
je success
jc inc_low
mov ch, bl
dec ch
jmp again
inc_low: mov cl, bl
         inc cl
         jmp again
success: display msg1
         jmp final
failed: display msg2
final:  mov mov ah, 4ch
        int 21H
end start

```



C:\DOS>cd masm

C:\MASM>edit binarysearch.asm

C:\MASM>masm binarysearch;;

Microsoft (R) Macro Assembler Version 5.00

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51438 + 465166 Bytes symbol space free

0 Warning Errors

0 Severe Errors

C:\MASM>link binarysearch;;

Microsoft (R) Overlay Linker Version 3.60

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LINK : warning L4021: no stack segment

C:\MASM>binarysearch

search success

C:\MASM>