

```

.model small
display macro msg
    lea dx,msg
    mov ah,09h
    int 21h
endm

.data

array dw 1234h,2345h,3356h
leng dw ($-array)/2
suc db 10,13, 'sucess and the position is '
pos db '$'
unsuc db 10,13, 'unsucess search $'
key dw 2234h

.code

mov ax,@data
mov ds,ax
mov bx,00h    ;bx=low
mov dx,leng   ;dx=high
mov cx,key

again:cmp bx,dx    ;is (low < high)
ja failure

    mov ax,bx
    add ax,dx
    shr ax,1       ;mid=(low+high)/2
    mov si,ax
    dec si         ;to acess a word data
    add si,si
    cmp cx,array[si] ;compare key with array[mid]
    jae next

    dec ax
    mov dx,ax      ; high=mid-1
    jmp again

next: je success
    inc ax         ;low= mid+1
    mov bx,ax
    jmp again

success: add al,'0' ;ascii conversion
    mov pos,al
    display suc
    jmp exit

failure: display unsuc
exit:
    mov ah,4ch
    int 21h

```