.model small ;size of program small

.data ;data segment

msg1 db 10,13,"No. of negative numbers:$"

msg2 db 10,13,"No. of positive numbers:$"

msg3 db 10,13,"Array of numbers is:-1,-2,-3,4,5,6,7$"

num db -1,-2,-3,4,5,6,7 ;declare array of no.

a db 0 ;declare a=0

b db 0 ;declare b=0

.code ;code segment

mov ax,@data ;load data

mov ds,ax

mov cl,07 ;set cl to 6

mov bx,0 ;set bx=0

mov dx,0 ;set dx=0

lea si,num ;load effective address

again: ;declare tag

mov al,[si] ;move value of si to al

shl al,01 ;shift al to left

jnc next ;jump next if no carry

inc bl ;incrementbl

jmp next2 ;jump to next2

next:inc dl ;increment dl

next2:inc si ;increment si

dec cl ;decrement cl

jnz again ;jump to again if cl!=0

mov a,bl ;move value of bl to a

mov b,dl ;move value of dl to b

mov ah,09h ;To Display Third Message

lea dx,msg3

int 21h

mov ah,09h ;To Display First Message

lea dx,msg1

int 21h

mov al,a ;move value of a to al

call display1 ;call display1

mov ah,09h ;To Display Second Message

lea dx,msg2

int 21h

mov al,b ;move value of b to al

call display1 ;display value in al

jmp exit ;jump to exit

proc display1 ;begin display process

mov ch,02 ;move value 2 to ch , to enter 2 digit number

mov bl,al ;set value of al to bl

a2:rol bl,04 ;rotate bl left by 4bit

mov dl,bl ;move value of bl to dl

and dl,0fh ;and dl and 0fh

cmp dl,09 ;compare dl to 9

jbe a1 ;jump to a1 if dl less

add dl,07h ;add 7 to dl

a1:add dl,30h ;add 30 to dl

mov ah,02 ;To print single digit

int 21h

dec ch ;decrement ch by 1

jnz a2 ;jump to a2 if ch!=0

ret ;return

display1 endp ;End display1

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exit: ;exit label

mov ah,4ch ;To exit the program

int 21h

end ;end