SC165

Assignment no. 5

Write an X86/64 ALP to count the number of positive and negative numbers from the array.

```
%macro print 2
mov rax, 1
mov rdi, 1
mov rsi, %1
mov rdx, %2
syscall
%endmacro
section .data
msg1 db "It is positive number",10
len1 equ $-msg1
msg2 db "It is negative number",10
len2 equ $-msg2
newline db 10
array dw 1001h,11h,9000h,8001h,
arcnt equ 4
pcnt db 0
ncnt db 0
nw db 10
section .bss
result resb 2
section .text
global _start
_start:
mov rsi,array
mov rcx,arcnt
l1:
bt word [rsi],15
jnc pnext
inc byte [ncnt]
jmp pskip
pnext:
inc byte [pcnt]
pskip:
inc rsi
inc rsi
loop l1
print msg1,len1
mov bl,[pcnt]
call display
```

```
print nw,1
print msg2,len2
mov bl,[ncnt]
call display
print nw,1
exit:
mov rax,60
mov rdi,0
syscall
display:
mov rcx,2
mov rdi,result
up:
mov al,bl
and al,0fH
cmp al,09H
jg add_37
add al,30H
jmp skip
add_37:add al,37H
skip: mov [edi],al
inc edi
dec cx
jnz up
print result,1
ret
```