Assignment no.5

Name:- Gaurav Patil

Roll No. - 21259

Batch – G2

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

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%macro rw 4

mov rax,%1

mov rdi,%2

mov rsi,%3

mov rdx,%4

syscall

%endmacro

section .data

m1 db 10,"Count of Positive numbers: "

l1 equ $-m1

m2 db 10,"Count of Negative numbers: "

l2 equ $-m2

m3 db 10

l3 equ $-m3

array db 10h, 35h, 25h, 60h, 15h,-11h,-23h

section .bss

count resb 2

pcount resb 2

ncount resb 2

totalcount resb 2

section .text

global \_start

\_start:

mov byte[count],07

mov byte[pcount],00

mov byte[ncount],00

mov rsi,array

Up:

mov rax, [rsi]

bt rax, 7

jc neg

inc byte[pcount]

jmp Down

neg:

inc byte[ncount]

Down:

inc rsi

dec byte[count]

jnz Up

rw 1,1,m1,l1

mov bh,[pcount]

call display

rw 1,1,m2,l2

mov bh,[ncount]

call display

rw 1, 1, m3, l3

;exit call

mov rax,60

mov rdi,00

syscall

display:

mov byte[count],02

mov byte[totalcount], 00

loop:

rol bh,04

mov al,bh

and al,0fH

cmp al,09h

jbe add\_30

add al,07h

add\_30:

add al,30h

mov[totalcount],al

dec byte[count]

jnz loop

rw 1, 1, totalcount, 02

rw 1, 1, m3, l3

ret

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for array- [10, 35, 25, 60, 15,-11,-23]

