Name: Prabodh Wankhede

Roll no. 57

Class: SE(B)

Batch – B3

Assignment No. 1

Problem Statement: Write an ALP to count no. of positive and negative nos. from the array

**Code:**

section .data

pmsg db 10, "positive no count is:"

pmsg\_len equ $-pmsg

nmsg db 10, "negative no count is:"

nmsg\_len equ $-nmsg

arr dd 12345678H,-11111111H,-22222222H,33333333H,-44444444H

arr\_size equ 05

;

section .bss

p\_count resq 1

n\_count resq 1

dispbuff resb 2

%macro display 2

mov rax,01

mov rdi,01

mov rsi,%1

mov rdx,%2

syscall

%endmacro

;

section .text

global \_start

\_start:

mov ebx,0

mov edx,0

mov esi,arr

mov ecx,05

next\_num:

mov eax,[esi]

rcl eax,1

jc negative

inc ebx

jmp skip

negative:

inc edx

skip:

add esi,4

loop next\_num

mov [p\_count],ebx

mov [n\_count],edx

display pmsg,pmsg\_len

mov byte bl,[p\_count]

call disp8\_proc

display nmsg,nmsg\_len

mov byte bl,[n\_count]

call disp8\_proc

mov rax,60

mov rbx,00

syscall

;

disp8\_proc:

mov ecx,2

mov edi,dispbuff

back1:

rol bl,04H

mov dl,bl

and dl,0FH

cmp dl,09H

jbe skip1

add dl,07H

skip1:

add dl,30H

mov [edi],dl

inc edi

loop back1

display dispbuff,2

ret

**OUTPUT:**

[HL@localhost ~]$ nasm -f elf64 filename.asm

[HL@localhost ~]$ ld -o filename filename.o

[HL@localhost ~]$ ./filename

positive no count is:02

negative no count is:03