**Title:- Find the largest of given numbers.**

**Assignment Name:- An X86/64 ALP to find the largest of given Byte/Word /Dword/64- bit numbers.**

; Largest no. program

section .data

%macro write 2

mov rax,1

mov rdi,1

mov rsi,%1

mov rdx,%2

syscall

%endmacro

array db 10h,20h,30h,40h,70h

msg1 db 10,"ALP to find the largest of the given no. in an array",10,13

len1 equ $-msg1

msg2 db 10,"The contents of the array are : ",10,13

len2 equ $-msg2

msg3 db 10,"The largest no. from the array is : ",10,13

len3 equ $-msg3

space db 10," "

newline db 10," "

section .bss

counter resb 1

result resb 4

section .txt

global \_start

\_start:

write msg1,len1

write msg2,len2

mov byte[counter],05

mov rsi,array

next:

mov al,[rsi]

push rsi

call disp

write space,1

pop rsi

inc rsi

dec byte[counter]

jnz next

write msg3,len3

mov byte[counter],05

mov rsi,array

mov al,0

repeat:

cmp al,[rsi]

jg skip

mov al,[rsi]

skip:

inc rsi

dec byte[counter]

jnz repeat

call disp

exit:

mov rax,60

mov rdi,0

syscall

disp:

mov bl,al

mov rdi,result

mov cx,02

up1:

rol bl,04

mov al,bl

and al,0fh

cmp al,09h

jg add\_37

add al,30h

jmp skip1

add\_37:

add al,37h

skip1:

mov [rdi],al

inc rdi

dec cx

jnz up1

write result,02

write newline,02

ret

OUTPUT:-

(base) admin1@410-7:~/F21111036$ nasm -f elf64 MPL8.asm

(base) admin1@410-7:~/F21111036$ ld -o new MPL8.o

(base) admin1@410-7:~/F21111036$ ./new

ALP to find the largest of the given no. in an array

The contents of the array are :

10

20

30

40

70

The largest no. from the array is :

70