Assignment no.3

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Batch –G2

Title - Write an X86/64 ALP to find the largest of given Byte/Word/Dword/64 -Bit Numbers.

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section .data

array db 11h,59h,33h,22h,44h

;msg1 db 10,"ALP to find the largest number in an array",10

;msg1\_len equ $ - msg1

msg2 db 10,"The Array contains the elements : ",10

msg2\_len equ $ - msg2

msg3 db 10,10, "The Largest number in the array is : ",10

msg3\_len equ $ - msg3

space db " "

space\_len equ $ - space

section .bss

counter resb 1

result resb 4

%macro write 2

mov rax,1

mov rdi,1

mov rsi,%1

mov rdx,%2

syscall

%endmacro

section .text

global \_start

\_start:

;write msg1 , msg1\_len

write msg2 , msg2\_len

mov byte[counter],05

mov rsi,array

next: mov al,[rsi]

push rsi

call disp

pop rsi

inc rsi

dec byte[counter]

jnz next

write msg3 , msg3\_len

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

mov rax,60

mov rdi,1

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 , 4

write space ,space\_len

ret

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