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Roll No.: SYCOC303 Course Name: Microprocessor Architecture Lab

Div: C Batch: C4 Course Code: BCE4302

Problem Statement:

Write X86/64 ALP to accept five 64-bit Hexadecimal numbers from the user and store them in an array and display the accepted numbers.

Input:

;Assignment No.01 Acceptation 5 64-bit Hex Numbers and storing it into an Array and Displaying it

;=====

section .data

msg1 db 10,13,"Enter any 5 numbers:"

len1 equ \$-msg1

msg2 db 10,13,"You have entered the following numbers:"

len2 equ \$-msg2

;=====

section .bss

array resd 200

counter resb 1

;=====

section .text

global _start

_start:

```
;displaying first string
```

```
mov rax,1
```

```
mov rdi,1
```

```
mov rsi,msg1
```

```
mov rdx,len1
```

```
syscall
```

```
;reading the entered numbers from console
```

```
mov byte[counter],05
```

```
mov rbx,00
```

```
loop1:
```

```
    mov rax,0
```

```
    mov rdi,0
```

```
    mov rsi,array
```

```
    add rsi,rbx
```

```
    mov rdx,17
```

```
    syscall
```

```
    add rbx,17
```

```
    dec byte[counter]
```

```
    jnz loop1
```

```
;diplaying second string
```

```
mov rax,1
```

```
mov rdi,1
```

```
mov rsi,msg2
```

```
mov rdx,len2
```

```
syscall
```

```
;writing the entered numbers to console
```

```
mov byte[counter],05
```

```
mov rbx,00
```

```
loop2:
```

```
mov rax,1
mov rdi,1
mov rsi,array
add rsi,rbx
mov rdx,17
syscall
add rbx,17
dec byte[counter]
jnz loop2
```

;=====

Output:

```
administrator@206-4:~/Desktop/MAL programs$ nasm -f elf64 Assignment1.asm
administrator@206-4:~/Desktop/MAL programs$ ld Assignment1.0 -o Assignment1
administrator@206-4:~/Desktop/MAL programs$ ./Assignment1
Enter any 5 numbers:10
20
30
40
50
You have entered the following numbers:10
20
30
40
50
```

=====