

Experiment No. 1

Name – Mehatab Mahibub Sanadi

Roll No. – CO2056

```
section .data
    msg1 db 10,13, "Enter 5 64 bit numbers",10,13
    len1 equ $-msg1
    msg2 db 10,13, "Entered 5 64 bit numbers",10,13
    len2 equ $-msg2

section .bss
    array resq 5
    counter resb 1

section .text
    global _start

_start:
    ; display
    mov rax, 1
    mov rdi, 1
    mov rsi, msg1
    mov rdx, len1
    syscall

    ; accept
    mov byte [counter], 5
    xor rbx, rbx
loop1:
    mov rax, 0
    mov rdi, 0
    lea rsi, [array + rbx*8] ; multiply index by 8 to access 64-bit numbers
    mov rdx, 8
    syscall
    add rbx, 1
    dec byte [counter]
    jnz loop1

    ; display
    mov rax, 1
    mov rdi, 1
    mov rsi, msg2
    mov rdx, len2
    syscall

    ; display entered numbers
    mov byte [counter], 5
    xor rbx, rbx
```

```
loop2:
    mov rax, 1
    mov rdi, 1
    lea rsi, [array + rbx*8]
    mov rdx, 8
    syscall
    add rbx, 1
    dec byte [counter]
    jnz loop2
```

```
; exit system call
mov rax, 60
xor rdi, rdi
syscall
```

output —

Enter 5 64 bit numbers :

54
31
42344
35
34

Entered 5 64 bit numbers : 54

31
42344
35
34