Assignment 4

Write 64-bit ALP to accept number and display it on screen.  
  
section .bss

input resb 20 ; Reserve 20 bytes for input buffer

section .text

global \_start ; Entry point for the program

\_start:

; Read input from the user

mov rax, 0 ; syscall number for sys\_read

mov rdi, 0 ; file descriptor for stdin

mov rsi, input ; pointer to input buffer

mov rdx, 20 ; number of bytes to read

syscall ; invoke system call

; Calculate the number of bytes read (ignoring newline)

mov rbx, rax ; store the number of bytes read in rbx

dec rbx ; Decrement to remove newline character (if present)

; Write input back to the screen

mov rax, 1 ; syscall number for sys\_write

mov rdi, 1 ; file descriptor for stdout

mov rsi, input ; pointer to the input buffer

mov rdx, rbx ; number of bytes to write (excluding newline)

syscall ; invoke system call

; Exit the program

mov rax, 60 ; syscall number for sys\_exit

xor rdi, rdi ; exit code 0

syscall ; invoke system call