

## Practical – 2

**Problem statement:** Write an X86/64 ALP to accept a string and to display its length.

**Program code:**

```
section .data
mesg1 db "enter the string",10,13
mesg1len equ $-mesg1
mesg2 db "length of the string is:",10,13
mesg2len equ $-mesg2

section .bss
strbuff resb 200
strlen: equ $-strbuff
alen resq 1
num resb 16

%macro print 2
mov rax,1
mov rdi,1
mov rsi,%1
mov rdx,%2
syscall
%endmacro

section .text
global _start
_start:
print mesg1,mesg1len
mov rax,0
mov rdi,0
```

```
mov rsi,strbuff
mov rdx,strlen
syscall
dec rax
mov[alen],rax
print mesg2,mesg2len
call disp64_proc
mov rax,60
mov rdi,0
syscall
disp64_proc:
mov rdi,num
mov rdi,num
mov rcx,16
mov rbx,[alen]
dispupl:
rol rbx,4
mov al,bl;
and al,0fh
cmp al,09
jbe dispskipl
add al,07
dispskipl:
add al,30h
mov [rdi],al
inc rdi
```

```
loop dispupl  
print num,16  
ret  
mov rax,60  
mov rdi,0  
syscall
```

**Output:**

```
atharva@atharva:~$ gedit lab2.asm  
atharva@atharva:~$ nasm -f elf64 lab2.asm  
atharva@atharva:~$ ld -o lab2 lab2.o
```