

# Experiment - 6

**Nageshwar Prasad Yadav**

**1. Write a program to reverse the given string for 8086.**

```
.model small
.stack 100h

.data
    message db "Hello, world!$"
    length equ $-message

.code
    mov ax, @data
    mov ds, ax

    mov ah, 9
    mov dx, offset message
    int 21h

    mov si, offset message
    mov di, offset message + length - 2
reverse_loop:
    cmp si, di
    jge print_reversed_string
    mov al, [si]
    mov bl, [di]
    mov [si], bl
    mov [di], al
    inc si
    dec di
    jmp reverse_loop

print_reversed_string:
    mov ah, 9
    mov dx, offset message
```

```
int 21h

mov ah, 4ch
int 21h
end
```

**2. Write an assembly language program to find number of times letter “e” exist in the string “exercise”, Store the count at memory.**

```
section .data
string db 'exercise', 0
count dw 0

section .text
global _start

_start:
    mov ecx, 0

loop_start:
    cmp byte [string + ecx], 0
    je loop_end

    cmp byte [string + ecx], 'e'
    jne increment_counter

    inc word [count]

increment_counter:
    inc ecx
    jmp loop_start

loop_end:
    mov word [0x1000], [count]

mov eax, 1
xor ebx, ebx
```

int 0x80