Experiment No. 9

Name – Mehatab Mahibub Sanadi
Roll No. – CO2056

P1.asm

```
section .data
    global msg6,len6,scount,ncount,chacount,new,new_len
    fname: db 'abc.txt',0
    msg: db "File opened successfully",0x0A
    len: equ $-msg
    msg1: db "File closed successfully",0x0A
    len1: equ $-msg1
    msg2: db "Error in opening file",0x0A
    len2: equ $-msg2
    msg3: db "Spaces:",0x0A
    len3: equ $-msg3
    msg4: db "NewLines:",0x0A
    len4: equ $-msg4
    msg5: db "Enter character",0x0A
    len5: equ $-msg5
    msg6: db "No of occurances:",0x0A
    len6: equ $-msg6
    new: db "",0x0A
    new_len: equ $-new
    scount: db 0
    ncount: db 0
    ccount: db 0
    chacount: db 0
```

```
section .bss

        global cnt,cnt2,cnt3,buffer
        fd: resb 17
        buffer: resb 200
        buf_len: resb 17
        cnt: resb 2
        cnt2: resb 2
        cnt3: resb 2
        cha: resb 2

%macro scall 4
        mov rax,%1
        mov rdi,%2
        mov rsi,%3
        mov rdx,%4
        syscall
        %endmacro

section .text
global _start
_start:

        extern spaces,enters,occ
        mov rax,2
        mov rdi,fname
        mov rsi,2
        mov rdx,0777
```

```
        syscall
        mov qword[fd],rax
        BT rax,63
        jc next
        scall 1,1,msg,len
        jmp next2
next:
        scall 1,1,msg2,len2
next2:
        scall 0,[fd],buffer, 200
        mov qword[buf_len],rax
        mov qword[cnt],rax
        mov qword[cnt2],rax
        mov qword[cnt3],rax
        scall 1,1,msg3,len3
        call spaces
        scall 1,1,msg4,len4
        call enters
        scall 1,1,msg5,len5
        scall 0,1,cha,2
        mov bl, byte[cha]
        call occ
        jmp exit

exit:
        mov rax,60
        mov rdi,0
        syscall
```

P2.asm

```
section .data
        extern msg6,len6,scount,ncount,chacount,new,new_len

section .bss
        extern cnt,cnt2,cnt3,scall,buffer

%macro scall 4
        mov rax,%1
        mov rdi,%2
        mov rsi,%3
        mov rdx,%4
        syscall
        %endmacro

section .text
        global main2

main2:
        global spaces,enters,occ

spaces:
        mov rsi,buffer

up:
        mov al, byte[rsi]
        cmp al,20H
```

```
        je next3
        inc rsi
        dec byte[cnt]
        jnz up
        jmp next4

next3:
        inc rsi
        inc byte[scount]
        dec byte[cnt]
        jnz up

next4:
        add byte[scount], 30h
        scall 1,1,scount, 2
        scall 1,1,new,new_lenret

enters:
        mov rsi,buffer

up2:
        mov al, byte[rsi]
        cmp al,0AH
        je next5
        inc rsi
        dec byte[cnt2]
        jnz up2
        jmp next6
```

```
next5:
        inc rsi
        inc byte[ncount]
        dec byte[cnt2]
        jnz up2

next6:
        add byte[ncount], 30h
        scall 1,1,ncount, 2
        scall 1,1,new,new_len
        ret

occ:
        mov rsi,buffer

up3:
        mov al, byte[rsi]
        cmp al,bl
        je next7
        inc rsi
        dec byte[cnt3]
        jnz up3
        jmp next8

next7:
        inc rsi
        inc byte[chacount]
        dec byte[cnt3]
        jnz up3
```

```
next8:
        add byte[chacount], 30h
        scall 1,1,msg6,len6
        scall 1,1,chacount, 1
        scall 1,1,new,new_len
        ret
```

abc.txt

Hi

Hello

How

Are

You?