

## Practical 11

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

section .data
title: db 0x0A, "----Commands ----", 0x0A
       db "1. Copy ", 10
       db "2. Type ", 0x0A
       db "3. Delete ", 0x0A
       db "4. Exit ", 0x0A
       db "Enter Your choice", 0x0A
title_len equ $ - title

openmsg: db "File Opened Successfully", 0x0A
openmsg_len equ $ - openmsg

closemsg: db "File Closed Successfully", 0x0A
closemsg_len equ $ - closemsg

errmsg: db "Failed to open file", 0x0A
errmsg_len equ $ - errmsg

delmsg: db "Deleted File", 0x0A
delmsg_len equ $ - delmsg

typemsg: db "-----File Contents -----", 0x0A
typemsg_len equ $ - typemsg

fname: db 'f1.txt', 0
f2name: db 'f2.txt', 0
f3name: db 'f3.txt', 0

section .bss
buffer: resb 200
bufferlen: resq 1
cnt1: resq 1
fdis: resq 1
choice: resb 2

section .text
global _start
_start:
    scall 1, 1, title, title_len    ; write title
    scall 0, 0, choice, 2          ; read user choice

    cmp byte [choice], '1'
    je COPY
    cmp byte [choice], '2'
    je TYPE
    cmp byte [choice], '3'
    je DELETE
    cmp byte [choice], '4'
    je EXIT

; ----- COPY -----
COPY:
    scall 2, fname, 2, 0777        ; open file1.txt (O_RDWR)
    mov [fdis], rax
```

```

    js open_fail                                ; check if failed
    scall 1, 1, openmsg, openmsg_len

    scall 0, [fdis], buffer, 200                ; read from file1
    mov [bufferlen], rax
    mov [cnt1], rax

    mov rdi, [fdis]
    mov rax, 3                                  ; close syscall
    syscall
    scall 1, 1, closemsg, closemsg_len

    ; Open file2.txt
    scall 2, f2name, 2, 0777
    mov [fdis], rax
    js open_fail
    scall 1, 1, openmsg, openmsg_len

    scall 1, [fdis], buffer, [bufferlen] ; write to file2

    mov rdi, [fdis]
    mov rax, 3                                  ; close syscall
    syscall
    scall 1, 1, closemsg, closemsg_len

    jmp _start

; ----- TYPE -----
TYPE:
    scall 2, f2name, 2, 0777
    mov [fdis], rax
    js open_fail
    scall 1, 1, openmsg, openmsg_len

    scall 0, [fdis], buffer, 200
    mov [bufferlen], rax

    scall 1, 1, typemsg, typemsg_len
    scall 1, 1, buffer, [bufferlen]

    mov rdi, [fdis]
    mov rax, 3
    syscall
    scall 1, 1, closemsg, closemsg_len
    jmp _start

; ----- DELETE -----
DELETE:
    mov rax, 87
    mov rdi, f3name
    syscall
    scall 1, 1, delmsg, delmsg_len
    jmp _start

; ----- EXIT -----
EXIT:
    mov rax, 60
    xor rdi, rdi
    syscall

; ----- OPEN FAILURE HANDLER -----
open_fail:
    scall 1, 1, errmsg, errmsg_len
    jmp EXIT

```

OUTPUT:

```
-----Commands -----
1. Copy
2. Type
3. Delete
4. Exit
Enter Your choice
1
File Opened Successfully
File Closed Successfully
File Opened Successfully
File Closed Successfully

-----Commands -----
1. Copy
2. Type
3. Delete
4. Exit
Enter Your choice
2
File Opened Successfully
=====File Contents =====
MP Practical 11
File Closed Successfully

-----Commands -----
1. Copy
2. Type
3. Delete
4. Exit
Enter Your choice
3
Deleted File

-----Commands -----
1. Copy
2. Type
3. Delete
4. Exit
Enter Your choice
4
[rllab1@fedora ~]$
```