

Assignment 5

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Batch: A4

Write ALP for Type Copy and Delete Command Using Command Line Arguments

CODE:

1. Type Command:

```
%macro WRITE 02
mov rax,01 mov
rdi,01 mov rsi,%1
mov rdx,%2
syscall
%endmacro
```

```
section .data
    err1 db "Invalid no of arguments",10
    len1 equ $-err1    err2 db "File could
not be opened",10    len2 equ $-err2
```

```
section .bss
fname resb 20
fd resq 1
buffer resb 100
    actl resq 1
```

```
section .text
global _start
_start:    pop rcx
cmp rcx,02H
jne error1    pop
rcx    pop rcx
```

```

mov rsi,fname
mov rdx,00H up:
mov
bl,byte[rcx+rdx]
cmp bl,00H je
down mov
byte[rsi+rdx],bl
inc rdx jmp up
down:
mov
byte[rsi+rdx],00H
mov rax,02H mov
rdi,fname mov rsi,00H
mov rdx,0644H
syscall cmp
rax,00H je error2
mov [fd],rax up1:
mov rax,00H mov
rdi,[fd] mov
rsi,buffer mov
rdx,100 syscall
mov [actl],rax
WRITE buffer,[actl]
cmp qword[actl],100
je up1 mov rax,03H
mov rdi,[fd] syscall
exit: mov rax,60
mov rdi,00 syscall
error1: WRITE
err1,len1 jmp exit
error2: WRITE
err2,len2
jmp exit

```

2. File copy Command:

```

%macro FOPEN 02 mov
rax,02 mov rdi,%1 mov
rsi,%2 mov rdx,0777O
syscall
%endmacro

```

```
%macro WRITE 02
```

```
mov rax,01 mov
```

```
rdi,01 mov rsi,%1
```

```
mov rdx,%2
```

```
syscall
```

```
%endmacro
```

```
section .data    err1 db "Invalid no of
```

```
arguments",10    len1 equ $-err1    err2 db
```

```
"Error Opening Source file",10    len2 equ
```

```
$-err2    err3 db "Error Opening destination
```

```
file",10    len3 equ $-err3    msg1 db "File
```

```
Copied successfully",10    len4 equ $-msg1
```

```
section .bss
```

```
src resb 32
```

```
dest resb 32 fd1 resq 1
```

```
fd2 resq 1    fd3
```

```
resq 1    buffer resb
```

```
100    act1 resq 1
```

```
section .text
```

```
global _start
```

```
_start:
```

```
pop rcx
```

```
cmp rcx,03H    jne
```

```
error1    pop rcx
```

```

mov rsi,src    mov
rdx,00H        up:

                mov
bl,byte[rcx+rdx]    cmp
bl,00H            je down

                mov
byte[rsi+rdx],bl    inc
rdx                jmp up

                down: mov byte[rsi+rdx],00H

                pop rcx

mov rsi,dest    mov
rdx,00H up1:

                mov
                bl,byte[rcx+rdx] cmp
                bl,00H je down1

                mov
byte[rsi+rdx],bl    inc
rdx                jmp up1

                down1: mov byte[rsi+rdx],00H

                FOPEN src,00H

cmp rax,00H    jle error2

mov [fd1],rax

FOPEN dest,00H

cmp rax,00

```

```
        jle createfile
mov [fd2],rax
mov rax,03    mov
rdi,[fd2]     syscall
jmp skipcreate
```

```
        createfile:
mov rax,85    mov
rdi,dest      mov
rsi,0777o     syscall
```

```
        skipcreate:
        FOPEN dest,01H
        cmp rax,00H
        jle error3
        mov [fd3],rax
        again:
        mov rax,00H
mov rdi,[fd1]  mov
rsi,buffer    mov
rdx,100       syscall
mov[act1],rax  mov
rax,01H       mov
rdi,[fd3]     mov
rsi,buffer    mov
rdx,[act1]    syscall
```

```

        cmp
qword[actl],100    je
again  mov rax,02    mov
rdi,[fd1]          syscall
mov rax,02    mov
rdi,[fd3]          syscall
WRITE msg1,len4 exit:
mov rax,60    mov rdi,00
syscall error1:

    WRITE err1,len1
jmp exit error2:
WRITE err2,len2
jmp exit error3:
WRITE err3,len3
jmp exit

```

3. File delete Command:

```

%macro FOPEN
02 mov rax,02 mov
rdi,%1 mov rsi,%2
mov rdx,0777O
syscall
%endmacro

```

```

%macro WRITE
02 mov rax,01 mov
rdi,01 mov rsi,%1
mov rdx,%2
syscall
%endmacro

```

```

section .data

```

```

    err1 db "Invalid no of arguments",10
len1 equ $-err1    err2 db "File not
found",10    len2 equ $-err2    msg1 db
"File Copied successfully",10    len3
equ $-msg1

```

```

section .bss
    fname resq 1

```

```

section .text
    global _start

```

```

_start:
    pop rcx
    cmp rcx,02H
    jne error1
    pop rcx
    pop rcx
    mov
rsi,fname    mov
rdx,00H    up:
    mov bl,byte[rcx+rdx]
    cmp bl,00H
    je down
    mov
byte[rsi+rdx],bl    inc
rdx    jmp up
down:
    mov byte[rsi+rdx],00H

    mov rax,02H
    mov rdi,fname
    mov rsi,00h
    mov rdx,07770
    syscall

    cmp rax,00h
    jle error2
    mov rax,03
    syscall

    mov rax,87
    mov rdi,fname
    syscall

```

WRITE msg1,len3

exit: mov rax,60

mov rdi,00

syscall error1:

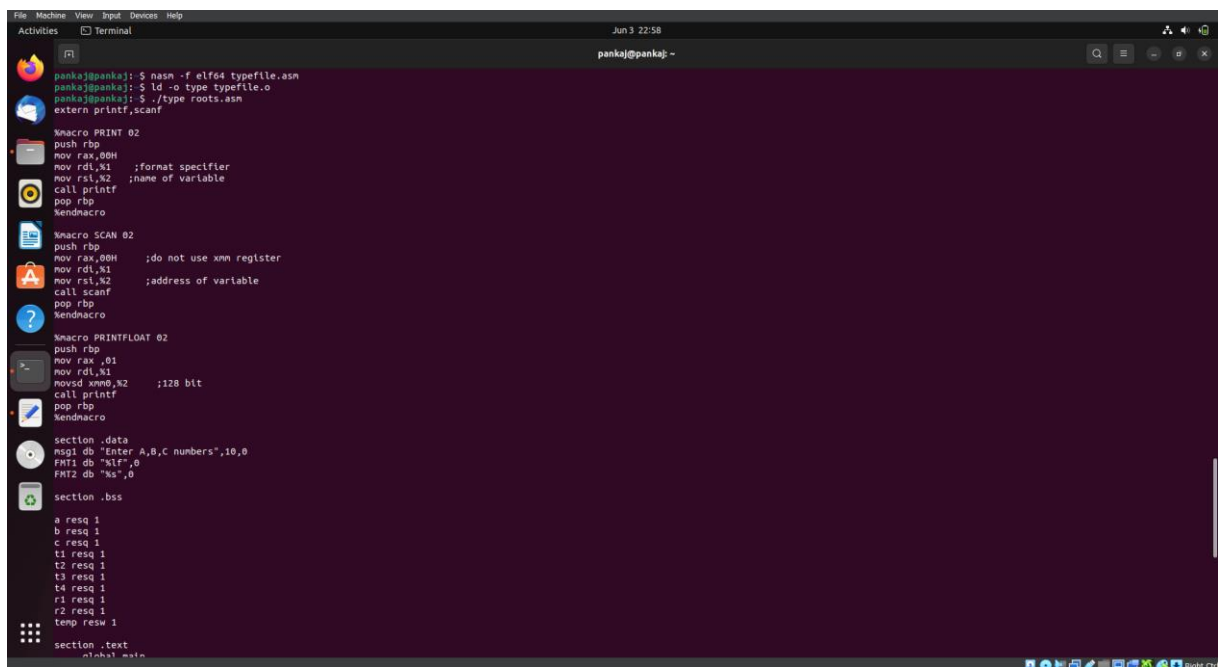
WRITE err1,len1

jmp exit error2:

WRITE err2,len2

jmp exit

OUTPUT:



```
File Machine View Input Devices Help
Jun 3 22:58
Activities Terminal
pankaj@pankaj: ~
pankaj@pankaj:~$ nasm -f elf64 typefile.asm
pankaj@pankaj:~$ ld -o type typefile.o
pankaj@pankaj:~$ ./type roots.asm
extern printf,scanf

%macro PRINT 02
push rbp
mov rax,00H ;format specifier
mov rdi,%2 ;name of variable
call printf
pop rbp
%endmacro

%macro SCAN 02
push rbp
mov rax,00H ;do not use xmm register
mov rdi,%1
mov rsi,%2 ;address of variable
call scanf
pop rbp
%endmacro

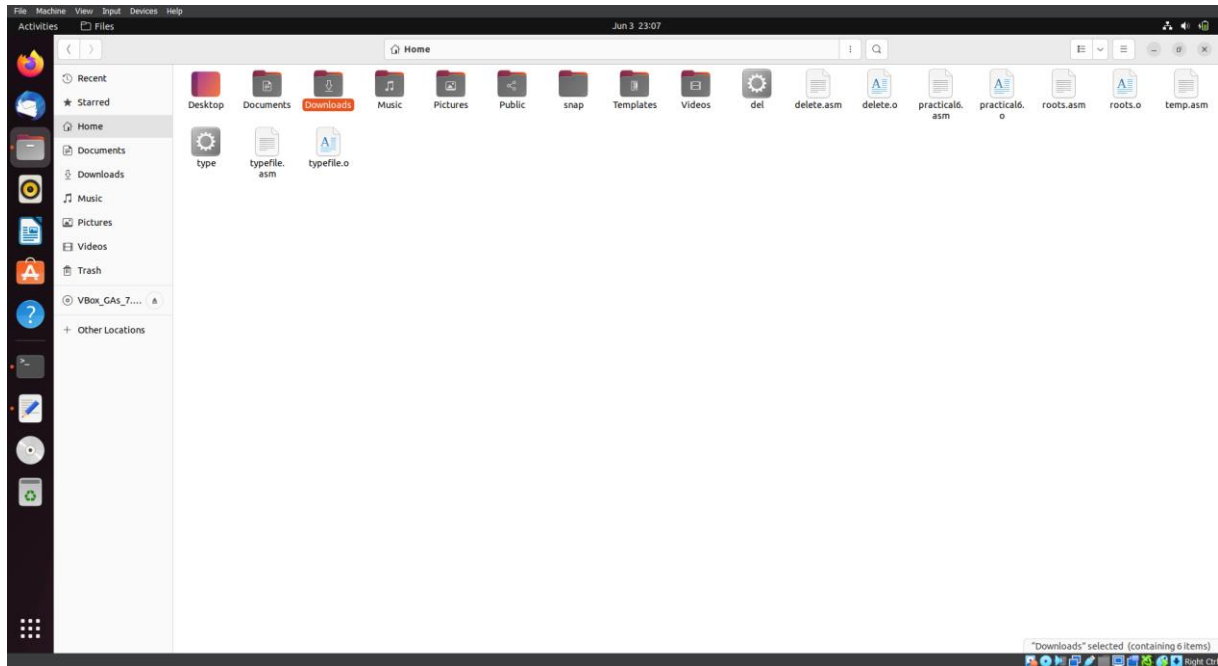
%macro PRINTFLOAT 02
push rbp
mov rax,%1
mov rdi,%1
movsd xmm0,%2 ;128 bit
call printf
pop rbp
%endmacro

section .data
msg1 db "Enter A,B,C numbers",10,0
fmt1 db "%lf",0
fmt2 db "%s",0

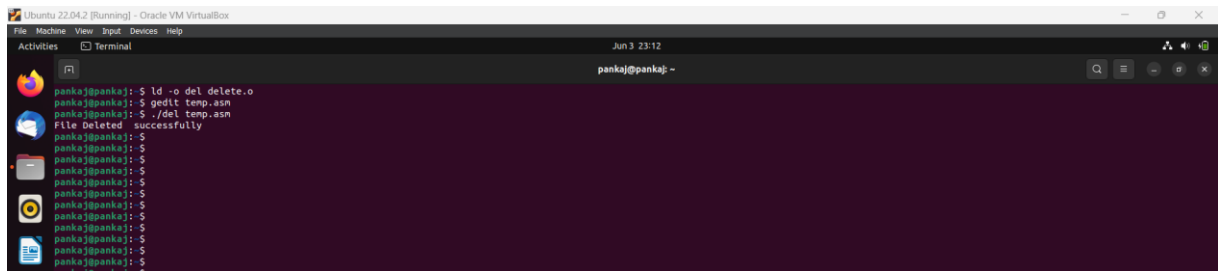
section .bss
a resq 1
b resq 1
c resq 1
t1 resq 1
t2 resq 1
t3 resq 1
t4 resq 1
r1 resq 1
r2 resq 1
temp resw 1

section .text
global main
```

Before Deletion



Deletion



After Deletion

