

Name: Sheikh Nabeel

Reg. No. 2024588

SE202L – Development Operations Lab

Lab 01 – Report

Part 6: Practical Exercises

Exercise 1: Exploring the Filesystem

```
sheikh@ubuntu:~$ pwd
/home/sheikh
sheikh@ubuntu:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
sheikh@ubuntu:~$ cd /
sheikh@ubuntu:/$ ls
bin          boot      dev       home      lib64      lost+found  nnt       proc      run      /sbin.usr-is-merged  srv       var
bin.usr-is-merged  cdrom    etc       lib       lib.usr-is-merged  media     opt       root      sbn       snap       sys       usr
sheikh@ubuntu:/$ /etc
sheikh@ubuntu:etc$ ls -l
total 1124
-rw-r--r-- 1 root          3444 Jul  5 2023 adduser.conf
drwxr-xr-x 3 root          4096 Aug  5 16:50 alsa
drwxr-xr-x 2 root          4096 Jan 29 18:16 alternatives
-rw-r--r-- 1 root          335 Apr  8 2024 anacrontab
-rw-r--r-- 1 root          433 Apr  8 2024 app.conf
drwxr-xr-x 5 root          4096 Aug  5 16:50 apparmor
drwxr-xr-x 2 root          4096 Aug  5 16:50 apparmor.d
drwxr-xr-x 3 root          4096 Aug  5 16:51 appport
drwxr-xr-x 9 root          4096 Jan 29 17:38 apt
drwxr-xr-x 3 root          4096 Jan 29 18:38 avahi
-rw-r--r-- 1 root          2319 Mar 31 2024 bash.bashrc
-rw-r--r-- 1 root           45 Jan 24 2020 bash_completion
-rw-r--r-- 1 root          367 Aug  2 2022 bindresport.blacklist
drwxr-xr-x 2 root          4096 Apr 19 2024 binfmt.d
drwxr-xr-x 2 root          4096 Aug  5 16:51 bluetooth
-rw-r----- 1 root           33 Aug  5 16:53 brlapi.key
drwxr-xr-x 7 root          4096 Aug  5 16:51 brltty
-rw-r--r-- 1 root          30571 Mar 31 2024 brltty.conf
drwxr-xr-x 3 root          4096 Aug  5 16:48 ca-certificates
-rw-r--r-- 1 root          6288 Aug  5 16:48 ca-certificates.conf
drwxr-xr-x 2 root          4096 Aug  5 16:51 chatscripts
drwxr-xr-x 5 root          4096 Jan 29 19:12 cloud
drwxr-xr-x 2 colord       4096 Jan 29 19:12 colord
drwxr-xr-x 2 root          4096 Jan 29 17:46 console-setup
drwxr-xr-x 2 root          4096 Aug  5 16:51 cracklib
drwxr-xr-x 2 root          4096 Apr 19 2024 credits
-rw-r----- 1 root          1800 Jan 29 2024 sudoers
drwxr-xr-x 2 root          4096 Aug  5 16:49 sudoers.d
-rw-r--r-- 1 root          9804 Apr  8 2024 sudo_logsrvd.conf
drwxr-xr-x 2 root          4096 Aug  5 16:48 supercat
-rw-r--r-- 1 root          2209 Mar 24 2024 sysctl.conf
drwxr-xr-x 2 root          4096 Aug  5 16:49 sysctl.d
drwxr-xr-x 2 root          4096 Aug  5 16:51 systat
drwxr-xr-x 6 root          4096 Aug  5 16:51 systemd
drwxr-xr-x 2 root          4096 Aug  5 16:48 termInfo
drwxr-xr-x 2 root          4096 Jan 29 18:11 thermal
-rw-r--r-- 1 root           8 Jan 29 19:09 timezone
drwxr-xr-x 2 root          4096 Apr 19 2024 tmpfiles.d
drwxr-xr-x 2 root          4096 Aug  5 16:49 ubuntu-advantage
-rw-r--r-- 1 root          1260 Jan 27 2023 ucf.conf
drwxr-xr-x 4 root          4096 Aug  5 16:49 udev
drwxr-xr-x 2 root          4096 Jan 29 18:38 udisks2
drwxr-xr-x 3 root          4096 Aug  5 16:51 ufw
drwxr-xr-x 3 root          4096 Aug  5 16:52 update-manager
drwxr-xr-x 2 root          4096 Aug  5 16:53 update-notif.d
drwxr-xr-x 2 root          4096 Apr  2 2025 update-notifier
drwxr-xr-x 2 root          4096 Aug  5 16:51 ufw
-rw-r--r-- 1 root          1523 Apr  8 2024 usb_modeswitch.conf
drwxr-xr-x 2 root          4096 Dec 16 2023 usb_modeswitch.d
lrwxrwxrwx 1 root          16 Aug  5 16:48 vconsole.conf -> default/keyboard
drwxr-xr-x 2 root          4096 Jan 29 18:38 vim
lrwxrwxrwx 1 root          23 Feb 26 2024 vtrgb -> /etc/alternatives/vtrgb
drwxr-xr-x 5 root          4096 Aug  5 16:50 vulkan
drwxr-xr-x 2 root          4096 Jun 19 2024 wgetrc
drwxr-xr-x 2 root          4096 Aug  5 16:51 wpa_supplicant
drwxr-xr-x 12 root         4096 Aug  5 16:53 x11
-rw-r--r-- 1 root          681 Apr  8 2024 xattr.conf
drwxr-xr-x 6 root          4096 Aug  5 16:50 xdg
drwxr-xr-x 2 root          4096 Aug  5 16:53 xml
-rw-r--r-- 1 root          460 Jan 20 2023 zsh_command_not_found
sheikh@ubuntu:etc$ cd -
sheikh@ubuntu:~$ pwd
/home/sheikh
sheikh@ubuntu:~$
```

Exercise 2: Creating a Directory Structure

```
sheikh@Ubuntu:~$ pwd
/home/sheikh
sheikh@Ubuntu:~$ mkdir devops_lab
sheikh@Ubuntu:~$ cd devops_lab
sheikh@Ubuntu:~/devops_lab$ mkdir week1 week2 week3
sheikh@Ubuntu:~/devops_lab$ ls
week1  week2  week3
sheikh@Ubuntu:~/devops_lab$ cd week1
sheikh@Ubuntu:~/devops_lab/week1$ mkdir notes
sheikh@Ubuntu:~/devops_lab/week1$ pwd
/home/sheikh/devops_lab/week1
sheikh@Ubuntu:~/devops_lab/week1$ cd ..
sheikh@Ubuntu:~/devops_lab$
```

Exercise 3: Working with Files

```
sheikh@Ubuntu:~$ cd devops_lab
sheikh@Ubuntu:~/devops_lab$ cd week1
sheikh@Ubuntu:~/devops_lab/week1$ touch intro.txt
sheikh@Ubuntu:~/devops_lab/week1$ touch commands.txt filesystem.txt practice.txt
sheikh@Ubuntu:~/devops_lab/week1$ ls
commands.txt  filesystem.txt  intro.txt  notes  practice.txt
sheikh@Ubuntu:~/devops_lab/week1$ cp intro.txt intro_backup.txt
sheikh@Ubuntu:~/devops_lab/week1$ mv practice.txt
mv: missing destination file operand after 'practice.txt'
Try 'mv --help' for more information.
sheikh@Ubuntu:~/devops_lab/week1$ mv practice.txt exercises.txt
sheikh@Ubuntu:~/devops_lab/week1$ ls
commands.txt  exercises.txt  filesystem.txt  intro_backup.txt  intro.txt  notes
sheikh@Ubuntu:~/devops_lab/week1$ rm intro_backup.txt
sheikh@Ubuntu:~/devops_lab/week1$ ls
commands.txt  exercises.txt  filesystem.txt  intro.txt  notes
sheikh@Ubuntu:~/devops_lab/week1$
```

Exercise 4: File Content Operations

```
sheikh@Ubuntu:~/devops_lab/week1$ touch my_notes.txt
sheikh@Ubuntu:~/devops_lab/week1$ nano my_notes.txt
sheikh@Ubuntu:~/devops_lab/week1$ cat my_notes.txt
DevOps is a set of practices that combines software development and IT operations.
sheikh@Ubuntu:~/devops_lab/week1$ nano my_notes.txt
sheikh@Ubuntu:~/devops_lab/week1$ cat my_notes.txt
DevOps is a set of practices that combines software development and IT operations.
I have learned a lot of things regarding linux commands, which will help me in my DevOps journey.

sheikh@Ubuntu:~/devops_lab/week1$ wc -l my_notes.txt
3 my_notes.txt
sheikh@Ubuntu:~/devops_lab/week1$ head -n 3 my_notes.txt
DevOps is a set of practices that combines software development and IT operations.
I have learned a lot of things regarding linux commands, which will help me in my DevOps journey.

sheikh@Ubuntu:~/devops_lab/week1$
```

Exercise 5: Advanced Navigation

```
sheikh@Ubuntu:~$ cd /usr/bin
sheikh@Ubuntu:~$ ls
'['
aa-enabled
aa-exec
aa-features-abi
aconect
acpidbg
add-apt-repository
addpart
addr2line
airscan-discover
alsabat
alsa-loop
alsamixer
alsatplg
alsaucm
anidi
amixer
apg
apgbfm
aplay
aplaymidi
apport-bug
apport-cli
apport-collect
apport-unpack
appres
appstreamcli
apropos
apt
apt-add-repository
apt-cache
apt-cdrom
apt-config
apt-dcon
apt-extracttemplates
apt-ftparchive
file
file2brl
find
findmnt
firefox
flock
fnt
fold
fonttosfnt
foo2ddst
foo2ddst-wrapper
foo2hpl2
foo2hpl2-wrapper
foo2hiperc
foo2hiperc-wrapper
foo2hp
foo2hp2600-wrapper
foo2lava
foo2lava-wrapper
foo2oak
foo2oak-wrapper
foo2qpd
foo2qpd-wrapper
foo2s1x
foo2s1x-wrapper
foo2xqx
foo2xqx-wrapper
foo2zjs
foo2zjs-icc2ps
foo2zjs-pstops
foo2zjs-wrapper
foomatic-rip
fprindt-delete
fprindt-enroll
fprindt-list
fprindt-verify
json_pp
jsonschema
kbinfo
kbd_mode
kbxutil
kernel-install
kerneloops-submit
kill
killall
kmod
kmodsign
l2ping
l2test
laptop-detect
last
lastb
lastlog
lavacode
lcf
ld
ldapadd
ldapcompare
ldapdelete
ldapexop
ldapmodify
ldapmodrdn
ldappasswd
ldapsearch
ldapurl
ldapwhoami
ld.bfd
ldd
ld.gold
ld.so
less
lessecho
pmap
pnm2ppa
pod2html
pod2man
pod2text
pod2usage
podchecker
poff
pon
POST
powerprofilesctl
ppdc
ppdhtml
ppdi
ppdmerge
ppdp
ppts
pr
precat
preconv
preunzip
prezip
prezip-bin
printafm
printenv
printer-profile
printf
prlimit
pro
prove
prtstat
ps
ps2ascii
ps2epsi
ps2pdf
ps2pdf12
time
timedatectl
timeout
tload
tnftp
toe
top
touch
tput
tr
trace-cmd
tracepath
tracker3
tracker3-daemon
tracker3-endpoint
tracker3-export
tracker3-extract
tracker3-help
tracker3-import
tracker3-index
tracker3-info
tracker3-reset
tracker3-search
tracker3-sparql
tracker3-sql
tracker3-status
tracker3-tag
transicc
transset
troff
true
truncate
trust
tset
tsort
tty
expr
factor
faillog
faked-sysv
faked-tcp
fakeroot
fakeroot-sysv
fakeroot-tcp
fallocalate
false
fc-cache
fc-cat
fc-conflist
fc-list
fc-match
fc-pattern
fc-query
fc-scan
fc-validate
fgconsole
fgrep
ionice
iostat
ip
ipcmk
ipcrm
ipcs
lppfind
lppool
iptables-xnl
lschroot
lsdv4-serial-debugger
lsdv4-serial-inputattach
lspell-wrapper
join
journalctl
jgiccc
jq
jsongdiff
jsonpatch
json-patch-jsongdiff
jsonpointer
pinentry-gnome3
pinentry-x11
ping
ping4
ping6
pinky
pipewire
pipewire-aes67
pipewire-avb
pipewire-pulse
pkaction
pkcheck
pkcon
pkexec
pkkill
pkmon
pkttysagent
plpm
pldd
plog
plymouth
systemd-sysusers
systemd-tmpfiles
systemd-tty-ask-password-agent
systemd-umount
tabs
tac
tail
tapestat
tar
taskset
tbl
tclsh
tclsh8.6
tcpdump
tecla
tee
telnet
tempfile
test
tic
tiflcc
zenity
zfgrep
zforce
zgrep
zip
zipcloak
zipdetails
zipgrep
zipinfo
zipnote
zipsplit
zipsplit
zjsdecode
zless
zmore
znew
zstd
zstdcat
zstdgrep
zstdless
zstdnt
sheikh@Ubuntu:~$ cd /var/log
sheikh@Ubuntu:~$ ls
alternatives.log
apport.log
apt
auth.log
sheikh@Ubuntu:~$ cd ~
sheikh@Ubuntu:~$ mkdir projects/web/frontend
mkdir: cannot create directory 'projects/web/frontend': No such file or directory
sheikh@Ubuntu:~$ mkdir -p projects/web/frontend
sheikh@Ubuntu:~$ cd projects/web/frontend
sheikh@Ubuntu:~$ cd /projects/web/frontend$ pwd
/home/sheikh/projects/web/frontend
sheikh@Ubuntu:~$ cd /projects/web/frontend$ cd ~
sheikh@Ubuntu:~$ pwd
/home/sheikh
sheikh@Ubuntu:~$
```

Lab Assessment Tasks

Task 1:

```
sheikh@Ubuntu:~$ mkdir devops_course
sheikh@Ubuntu:~$ cd devops_course
sheikh@Ubuntu:~/devops_course$ mkdir labs assignments
sheikh@Ubuntu:~/devops_course$ pwd
/home/sheikh/devops_course
sheikh@Ubuntu:~/devops_course$ ls
assignments  labs
sheikh@Ubuntu:~/devops_course$ cd labs
sheikh@Ubuntu:~/devops_course/labs$ mkdir lab1 lab2 lab3
sheikh@Ubuntu:~/devops_course/labs$ ls
lab1  lab2  lab3
sheikh@Ubuntu:~/devops_course/labs$ cd ..
sheikh@Ubuntu:~/devops_course$ cd assignments
sheikh@Ubuntu:~/devops_course/assignments$ mkdir assignment1 assignment2
sheikh@Ubuntu:~/devops_course/assignments$ ls
assignment1  assignment2
sheikh@Ubuntu:~/devops_course/assignments$
```

Task 2:

```
sheikh@Ubuntu:~/devops_course$ cd labs/lab1
sheikh@Ubuntu:~/devops_course/labs/lab1$ touch intro.txt commands.txt filesystem.txt notes.txt summary.txt
sheikh@Ubuntu:~/devops_course/labs/lab1$ ls
commands.txt  filesystem.txt  intro.txt  notes.txt  summary.txt
sheikh@Ubuntu:~/devops_course/labs/lab1$
```

Task 3:

```
sheikh@Ubuntu:~/devops_course/labs/lab1$ nano summary.txt
sheikh@Ubuntu:~/devops_course/labs/lab1$ cat summary.txt
DevOps is a set of practices that combines software development (Dev) and IT operations (Ops). It aims to shorten the development lifecycle and deliver high-quality software continuously. DevOps emphasizes collaboration, automation, and monitoring throughout the software lifecycle. It helps teams release updates faster and more reliably.
```

Task 4:

```
sheikh@Ubuntu:~/devops_course/labs/lab1$ ls
commands.txt  filesystem.txt  intro.txt  notes.txt  summary.txt
sheikh@Ubuntu:~/devops_course/labs/lab1$ cp lab1/*.txt lab2/
cp: cannot stat 'lab1/*.txt': No such file or directory
sheikh@Ubuntu:~/devops_course/labs/lab1$ cd ..
sheikh@Ubuntu:~/devops_course/labs$ cp lab1/*.txt lab2/
sheikh@Ubuntu:~/devops_course/labs$ cd lab2
sheikh@Ubuntu:~/devops_course/labs/lab2$ ls
commands.txt  filesystem.txt  intro.txt  notes.txt  summary.txt
sheikh@Ubuntu:~/devops_course/labs/lab2$
```

Task 5:

```
sheikh@Ubuntu:~/devops_course/labs/lab2$ mv summary.txt devops_summary.txt
sheikh@Ubuntu:~/devops_course/labs/lab2$ ls
commands.txt  devops_summary.txt  filesystem.txt  intro.txt  notes.txt
sheikh@Ubuntu:~/devops_course/labs/lab2$
```

Task 6:

```
sheikh@Ubuntu:~/devops_course/labs$ rm -r lab3/  
sheikh@Ubuntu:~/devops_course/labs$ ls  
lab1  lab2
```

Task 7:

```
sheikh@Ubuntu: $ pwd  
/home/sheikh  
sheikh@Ubuntu: $ touch evidence.txt  
sheikh@Ubuntu: $ pwd > evidence.txt  
sheikh@Ubuntu: $ ls -la devops_course >> evidence.txt  
sheikh@Ubuntu: $ cat devops_course/labs/lab1/summary.txt >> evidence.txt  
sheikh@Ubuntu: $ cat evidence.txt  
/home/sheikh  
total 16  
drwxrwxr-x  4 sheikh sheikh 4096 Jan 31 12:34 .  
drwxr-x-- 18 sheikh sheikh 4096 Jan 31 12:47 ..  
drwxrwxr-x  4 sheikh sheikh 4096 Jan 31 12:35 assignments  
drwxrwxr-x  4 sheikh sheikh 4096 Jan 31 12:46 labs  
DevOps is a set of practices that combines software development (Dev) and IT operations (Ops). It aims to shorten the development lifecycle and deliver high-quality software continuously. DevOps emphasizes collaboration, automation, and monitoring throughout the software lifecycle. It helps teams release updates faster and more reliably.
```

== THE END ==