File Operations

ls: Lists all files and directories in the present working directory.

ls -R: Lists files in sub-directories as well.

ls -a: Shows hidden files.

ls -al: Lists files and directories with detailed information like permissions, size, owner, etc.

cd directoryname: Changes the directory.

cd ..: Moves one level up.

pwd: Displays the present working directory.

cat > filename: Creates a new file.

cat filename: Displays the file content.

cat file1 file2 > file3: Joins two files (file1 and file2) and stores the output in a new file (file3).

touch filename: Creates or modifies a file.

rm filename: Deletes a file.

cp source destination: Copies files from the source path to the destination path.

mv source destination: Moves files from the source path to the destination path.

find / -name filename: Finds a file or a directory by its name starting from root.

file filename: Determines the file type.

less filename: Views the file content page by page.

head filename: Views the first ten lines of a file.

tail filename: Views the last ten lines of a file.

lsof: Shows which files are opened by which process.

du -h --max-depth=1: Shows the size of each directory. Use --max-depth=1 to limit the output to the current directory and its immediate children.

fdisk: Disk partition manipulation command.

Directory Operations

mkdir directoryname: Creates a new directory in the present working directory.

rmdir directoryname: Deletes a directory.

cp -r source destination: Copies directories recursively.

mv olddir newdir: Renames directories.

find / -type d -name directoryname: Finds a directory starting from root.

Process Operations

ps: Displays your currently active processes.

top: Displays all running processes.

kill pid: Kills the process with given pid.

pkill name: Kills the process with the given name.

bg: Resumes suspended jobs without bringing them to foreground.

fg: Brings the most recent job to foreground.

fg n: Brings job n to the foreground.

renice +n [pid]: Change the priority of a running process.

&> filename: Redirects both stdout and stderr to the file filename.

1> filename: Redirect stdout to file filename.

2> filename: Redirect stderr to file filename.

File Permissions

chmod octal filename: Change the permissions of file to octal, which can be between 0 (no permissions) to 7 (full permissions).

chown ownername filename: Change file owner.

chgrp groupname filename: Change group owner.

Networking

ping host: Ping a host and outputs results.

whois domain: Get whois information for domain.

dig domain: Get DNS information for domain.

netstat -pnltu: Display various network-related information such as network connections, routing tables, interface statistics, etc.

ifconfig: Displays IP addresses of all network interfaces.

ssh user@host: Remote login into the host as user.

scp: Transfers files between hosts over ssh.

wget url: Download files from the web.

curl url: Sends a request to a URL and returns the response.

traceroute domain: Prints the route that a packet takes to reach the domain.

mtr domain: MTR combines the functionality of the traceroute and ping programs in a single network diagnostic tool.

ss: Another utility to investigate sockets. It's a more modern alternative to netstat.

nmap: Network exploration tool and security scanner.

Archives and Compression

tar cf file.tar files: Create a tar named file.tar containing files.

tar xf file.tar: Extract the files from file.tar.

gzip file: Compresses file and renames it to file.gz.

gzip -d file.gz: Decompresses file.gz back to file.

zip -r file.zip files: Create a zip archive named file.zip.

unzip file.zip: Extract the contents of a zip file.

Text Processing

grep pattern files: Search for pattern in files.

grep -r pattern dir: Search recursively for pattern in dir.

command | grep pattern: Pipe the output of command to grep for searching.

echo 'text': Prints text.

sed 's/string1/string2/g' filename: Replaces string1 with string2 in filename.

diff file1 file2: Compares two files and shows the differences.

wc filename: Count lines, words, and characters in a file.

awk: A versatile programming language for working on files.

sed -i 's/string1/string2/g' filename: Replace string1 with string2 in filename. The -i option edits the file in-place.

cut -d':' -f1 /etc/passwd: Cut out the first field of each line in /etc/passwd, using colon as a field delimiter.

Disk Usage

df: Shows disk usage.

du: Shows directory space usage.

free: Show memory and swap usage.

whereis app: Show possible locations of app.

System Info

date: Show the current date and time.

cal: Show this month's calendar.

uptime: Show current uptime.

w: Display who is online.

whoami: Who you are logged in as.

uname -a: Show kernel information.

df -h: Disk usage in human-readable format.

du -sh: Disk usage of current directory in human-readable format.

free -m: Show free and used memory in MB.

Package Installations

sudo apt-get update: Updates package lists for upgrades.

sudo apt-get upgrade: Upgrades all upgradable packages.

sudo apt-get install pkgname: Install pkgname.

sudo apt-get remove pkgname: Removes pkgname.

Others

command1 ; command2: Run command1 and then command2.

command1 && command2: Run command2 if command1 is successful.

command1 || command2: Run command2 if command1 is not successful.

command &: Run command in background.

Version Control (Git Commands)

git init: Initialize a local git repository.

git clone url: Create a local copy of a remote repository.