Essential Linux Commands

File and Directory Management

ls: Lists directory contents.

cd: Changes the current directory.

pwd: Displays the current working directory.

mkdir: Creates a new directory.

rmdir: Removes an empty directory.

touch: Creates an empty file or updates the timestamp of an existing file.

cp: Copies files or directories.

mv: Moves or renames files or directories.

rm: Removes files or directories.

find: Searches for files in a directory hierarchy.

locate: Finds files by name quickly.

tree: Displays directory structure in a tree-like format.

File Viewing and Editing

cat: Concatenates and displays file content.

less: Views file content one page at a time.

more: Views file content one screen at a time.

head: Displays the first part of a file.

tail: Displays the last part of a file.

nano: Simple text editor.

vim: Advanced text editor.

gedit: GUI-based text editor.

File Permissions and Ownership

chmod: Changes file permissions.

chown: Changes file owner and group.

chgrp: Changes group ownership.

umask: Sets default file permissions.

System Information

uname -a: Displays system information.

df: Shows disk space usage.

du: Estimates file and directory space usage.

top: Displays running processes.

htop: Interactive process viewer.

free: Displays memory usage.

uptime: Shows how long the system has been running.

hostname: Displays or sets the system's hostname.

dmesg: Prints kernel ring buffer messages.

lscpu: Displays CPU architecture information.

lsblk: Lists information about block devices.

Network Commands

ping: Checks connectivity to a host.

ifconfig: Configures network interfaces.

ip: IP configuration and management.

netstat: Displays network connections, routing tables, etc.

ss: Another utility to investigate sockets.

wget: Downloads files from the web.

curl: Transfers data from or to a server.

scp: Securely copies files between hosts.

ftp: Transfers files using the FTP protocol.

ssh: Connects to a remote machine securely.

Process Management

ps: Displays current processes.

kill: Terminates processes by PID.

killall: Terminates processes by name.

bg: Resumes a suspended job in the background.

fg: Brings a background job to the foreground.

jobs: Lists active jobs.

nice: Starts a process with modified scheduling priority.

renice: Alters priority of an existing process.

Package Management (Debian-based Systems)

apt-get update: Updates package lists.

apt-get upgrade: Upgrades installed packages.

apt-get install [package]: Installs a new package.

apt-get remove [package]: Removes a package.

apt-cache search [keyword]: Searches for packages.

Disk Usage and Management

fdisk: Disk partitioning tool.

mkfs: Builds a filesystem.