Linux Command Notes

A comprehensive guide to commonly used Linux commands with clear explanations.

1. File & Directory Commands

Command	What It Does
`pwd`	Shows the current directory you are in (Print Working Directory).
`ls`	Lists all files and directories in the current directory.
`cd <directory>`	Changes the current directory to the specified one.
`mkdir <directory>`	Creates a new directory.
`rmdir <directory>`	Deletes an empty directory.
`rm <file>`	Deletes a file.
`rm -rf <file/dir>`	Forcefully deletes files or directories, including non-empty ones.
`touch <file>`	Creates a new empty file.
`cat <file>`	Displays the content of a file.
`more <file>`	Allows you to read a file one page at a time (forward only).
`less <file>`	Allows you to read a file forward and backward.
`head <file>`	Shows the first 10 lines of a file (by default).
`tail <file>`	Shows the last 10 lines of a file (by default).

2. File Management

Command	What It Does
`cp <src> <dest>`	Copies files or directories from source to destination.
`mv <src> <dest>`	Moves or renames files/directories.
`nano <file>`	Opens a terminal-based text editor to edit a file.
`echo <text>`	Prints the text or variable value to the terminal.
`chmod 777 <file>`	Gives all permissions (read, write, execute) to everyone for a file.
`chown user:group <file>`	Changes the owner and group of a file or directory.

3. System Information

Command	What It Does
`uname -a`	Shows detailed system information including kernel version.
`lscpu`	Displays CPU information such as cores, threads, and architecture.
`free -h`	Shows memory usage in a human-readable format.
`df`	Displays available and used disk space.
`du`	Shows disk usage of files and directories.
`lsblk`	Lists all block devices like disks and partitions.
`top`	Displays real-time system performance, CPU and memory usage.
`htop`	Enhanced version of top with interactive options and search.

4. User & Session Commands

Command	What It Does
`whoami`	Displays the current logged-in user.
`who`	Shows all users currently logged into the system.
`tty`	Displays the terminal you are using (e.g., tty1, tty2).
`ctrl + alt + F1-F7`	Switches between different terminal sessions.

5. Networking Commands

Command	What It Does
`ping <host>`	Checks network connectivity to a host.
`ip a`	Displays IP addresses and network interface information.
`ip route`	Shows the system routing table.

6. Package Management (Debian/Ubuntu)

Command	What It Does
`apt`	The package manager to install, update, and remove software.
`sudo apt update`	Updates the package repository information.

7. Services & Background Commands

Command	What It Does
`systemctl start <service>`	Starts a specific system service.
`tmux`	Opens a terminal multiplexer to manage multiple terminal sessions in one window.