Linux Command Line Cheat Sheet

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NAVIGATE

`pwd`	Print current directory
`ls -la`	List all files, with details
`cd dir` / `cd ..`	Enter a directory / go up one
`cd ~` / `cd -`	Home / previous directory
`/var/log` vs `logs/`	Absolute vs relative path

FILES AND DIRECTORIES

`touch a.txt`	Create an empty file
`mkdir -p a/b/c`	Create nested directories
`cp a.txt b.txt`	Copy a file
`cp -r src/ backup/`	Copy a directory
`mv old new`	Move or rename
`rm file` / `rm -r dir`	Delete (no undo!)
`ln -s target link`	Symbolic link (shortcut)
`*.log`, `file?.txt`	Wildcards: many / one character

READ FILES

`cat file`	Print the whole file
`less file`	Scroll (q to quit, /word to search)
`head -n 20 file`	First 20 lines
`tail -f app.log`	Follow a growing log
`nano file`	Edit (Ctrl+O save, Ctrl+X exit)

PERMISSIONS

`-rwxr-xr--`	type · owner · group · others
`r=4 w=2 x=1`	Add per set: 7=rwx, 5=r-x, 4=r--
`chmod 755 run.sh`	rwxr-xr-x (scripts, dirs)
`chmod 600 key.pem`	Private file (SSH keys)
`chmod u+x run.sh`	Owner may execute
`sudo chown user:group f`	Change owner and group
`whoami` / `id`	Your user / your groups

SEARCH

`grep "error" app.log`	Lines containing a word
`grep -rin "todo" src/`	Recursive, ignore case, line numbers
`find . -name "*.ts"`	Find files by name
`which node`	Where a command lives

PIPES AND REDIRECTION

`cmd1 | cmd2`	Output of cmd1 into cmd2
`cmd > out.txt`	Write output to a file (overwrite)
`cmd >> out.txt`	Append to a file
`cmd 2> err.txt`	Redirect errors
`cmd > /dev/null 2>&1`	Silence everything
`cat log | grep 404 | wc -l`	Count 404 lines

PROCESSES

`ps aux`	All running processes
`ps aux | grep node`	Find a process
`top`	Live CPU / memory view
`kill PID` / `kill -9 PID`	Stop / force stop
`Ctrl+C` / `Ctrl+Z`	Interrupt / suspend

ENVIRONMENT

`echo $PATH`	Where the shell looks for commands
`export NAME=value`	Set a variable for child processes
`alias ll='ls -la'`	Shortcut (save in ~/.bashrc or ~/.zshrc)
`source ~/.zshrc`	Reload your config

SHELL SCRIPTS

`#!/usr/bin/env bash`	Shebang: first line of a script
`name="dev"; echo "$name"`	Variables (no spaces around =)
`today=$(date +%F)`	Command substitution
`read -p "Name: " n`	Read user input
`chmod +x s.sh && ./s.sh`	Make executable and run

REMOTE SERVERS

`ssh -i key.pem user@host`	Log in to a server
`scp file user@host:~/`	Copy a file to the server
`exit`	Leave the session

Full course: **CLI Mastery**, 57 lessons, from the terminal basics to shell scripts and SSH on AWS.

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