Basic Bash Command Encyclopedia

A comprehensive reference of **100 essential Bash commands** for terminal navigation, file manipulation, system management, and more.

Navigation & Directory Management

- **pwd : Print working directory**
- **ls : List directory contents**
- **cd : Change directory**
- **mkdir : Create directory**
- **rmdir : Remove directory**
- tree : Show directory structure
- du : Disk usage summary
- df : Display disk space usage
- find : Search for files/directories
- locate : Find files by name

Special Symbols & Shorthand

- ~ : Home directory
- . : Current directory
- * : Glob, match any character
- | : Pipe, send output from one command as input to another
- > : write to a file
- >> : append to a file
- < : Send input from file to command
- ; : Separate multiple commands on a line
- \t : tab character
- \n : newline character
- # : comment, ignore to end of line

File Viewing & Manipulation

- **cat : Display file contents**
- **head : Show first lines of file**
- **tail : Show last lines of file**
- **cp : Copy files or directories**
- **mv : Move or rename files**
- **rm : Remove files or directories**
- touch : Create empty file
- **vim : Open text editor**
- less : View file content interactively
- sort : Sort lines in a file

Searching & Text Processing

- **grep : Search for text in files**
- **sed : Stream editor for find/replace**
- **wc : Count lines, words, and bytes**
- **cut : Remove sections from lines**
- uniq : Report or filter duplicate lines
- diff : Compare files line by line
- comm : Compare sorted files
- tr : Translate or delete characters
- xargs : Build and execute command lines

Compression & Archives

- tar : Create/extract archives
- **gzip : Compress files**
- **gunzip : Decompress gzip files**
- zip : Create zip archives
- unzip : Extract zip archives
- **zcat : View compressed files**

Network & Downloads

- **wget : Download files from the web**
- **curl : Transfer data to/from URLs**
- ping : Check network connection
- scp : Copy files via SSH
- ssh : Connect to remote server
- host : DNS lookup utility
- ftp : File transfer protocol client

Permissions & Ownership

- **chmod : Change file permissions**
- chown : Change file owner/group
- chgrp : Change group ownership
- sudo : Run command as superuser
- umask : Set default file permissions
- id : Display user identity
- whoami : Show current user
- groups : Show group memberships
- passwd : Change user password
- su : Switch user

System Info & Process Management

- top : Display running processes
- ps : Report current processes
- kill : Terminate processes
- pkill : Kill by process name
- jobs : List active jobs

Variables, Logic & Output

- echo : Print text to screen
- VAR=value : Assign a variable
- $VAR : Use a variable
- export : Make variable available to subshells
- read : Read input from user
- if/fi : Conditional statement
- for/do/done : Loop structure
- while/do/done : Loop while condition true
- case/esac : Switch structure
- set : Set or unset shell options
- unset : Remove variable or function

Utilities & Shortcuts

- history : Show command history
- !! : Repeat last command
- !n : Run nth command from history
- alias : Create command shortcut
- unalias : Remove alias
- clear : Clear terminal screen
- man : Display command manual
- help : Show built-in help
- date : Show or set system date
- time : Show the runtime of the following command
- dos2unix : convert Windows file to readable Unix file, remove carriage returns