

# The Mac Terminal Commands Cheat Sheet

| Command                 | Action   |
|-------------------------|--|
| <b>Shortcuts</b>        |  |
| Tab                     | Auto-complete file and folder names                              |
| Ctrl + A                | Go to the beginning of the line you're currently typing on       |
| Ctrl + E                | Go to the end of the line you're currently typing on             |
| Ctrl + U                | Clear the line before the cursor                                 |
| Ctrl + K                | Clear the line after the cursor                                  |
| Ctrl + W                | Delete the word before the cursor                                |
| Ctrl + T                | Swap the last two characters before the cursor                   |
| Esc + T                 | Swap the last two words before the cursor                        |
| Ctrl + L                | Clear the screen   |
| Ctrl + C                | Kill whatever you're running                                     |
| Ctrl + D                | Exit the current shell   |
| Option + →              | Move cursor one word forward                                     |
| Option + ←              | Move cursor one word backward                                    |
| Ctrl + F                | Move cursor one character forward                                |
| Ctrl + B                | Move cursor one character backward                               |
| Ctrl + Y                | Paste whatever was cut by the last command                       |
| Ctrl + Z                | Puts whatever you're running into a suspended background process |
| Ctrl + _                | Undo the last command  |
| <b>Basics</b>           |  |
| / (Forward Slash)       | Top level directory  |
| . (Single Period)       | Current directory  |
| .. (Double Period)      | Parent directory   |
| ~ (Tilde)               | Home directory   |
| sudo [command]          | Run command with the security privileges of the super user       |
| nano [file]             | Opens the Terminal editor  |
| open [file]             | Opens a file   |
| [command] -h            | Get help about a command   |
| man [command]           | Show the help manual of the command                              |
| <b>Change Directory</b> |  |
| cd                      | Home directory   |
| cd [folder]             | Change directory, e.g. cd Documents                              |
| cd ~                    | Home directory   |
| cd/                     | Root of the drive  |
| cd -                    | Previous directory or folder you last browsed                    |
| pwd                     | Show your working directory                                      |

| Command                                | Action  |
|--|---|
| cd..                                   | Move up to the parent directory   |
| cd../..                                | Move up two levels  |
| <b>List Directory Contents</b>         |   |
| ls                                     | Display the name of files and subdirectories in the directory   |
| ls -C                                  | Force multi-column output of the listing  |
| ls -a                                  | List all entries including those with .(period) and ..(double period)   |
| ls -1                                  | Output the list of files in one entry per line format   |
| ls -F                                  | Display a / (slash) immediately after each path that is a directory, * (asterisk) after executable programs or scripts, and @ after a symbolic link |
| ls -S                                  | Sort files or entries by size   |
| ls -l                                  | List in a long format. Includes file mode, owner and group name, date a file was modified, pathname, and more                                       |
| ls -lt                                 | List the files sorted by time modified (most recent first)  |
| ls -lh                                 | Long listing with human readable file sizes in KB, MB, or GB  |
| ls -lo                                 | List the file names with size, owner, and flags   |
| ls -la                                 | List detailed directory contents, including hidden files  |
| <b>File Size and Disk Space</b>        |   |
| du                                     | List usage for each subdirectory and its contents   |
| du -sh [folder]                        | Human readable output of all files in a directory   |
| du -s                                  | Display an entry for each specified file  |
| du -sk*   sort -nr                     | List files and folders, totaling the size including the subfolders. Replace sm* to list directories in MB   |
| df -h                                  | Calculate your system's free disk space   |
| df -H                                  | Calculate free disk space in powers of 1,000 (as opposed to 1,024)  |
| <b>File and Directory Management</b>   |   |
| mkdir <dir>                            | Create new folder named <dir>   |
| mkdir -p <dir>/<dir>                   | Create nested folders   |
| mkdir <dir1> <dir2> <dir3>             | Create several folders at once  |
| mkdir "<dir>"                          | Create a folder with a space in the filename  |
| rmdir <dir>                            | Delete a folder (only works on empty folders)   |
| rm -R <dir>                            | Delete a folder and its contents  |
| touch <file>                           | Create a new file without any extension   |
| cp <file> <dir>                        | Copy a file to the folder   |
| cp <file> <newfile>                    | Copy a file to the current folder   |
| cp <file>~/<dir>/<newfile>             | Copy a file to the folder and rename the copied file  |
| cp -R <dir> "<new dir>"                | Copy a folder to a new folder with spaces in the filename   |
| cp -i <file><dir>                      | Prompts you before copying a file with a warning overwrite message  |
| cp <file1> <file2> <file3>/Users/<dir> | Copy multiple files to a folder   |
| rm <file>                              | Delete a file (This deletes the file permanently; use with caution.)  |
| rm -i <file>                           | Delete a file only when you give confirmation   |
| rm -f <file>                           | Force removal without confirmation  |
| rm <file1> <file2> <file3>             | Delete multiple files without any confirmation  |
| mv <file> <newfilename>                | Move/rename   |
| mv <file> <dir>                        | Move a file to the folder, possibly by overwriting an existing file   |
| mv -i <file> <dir>                     | Optional -i flag to warn you before overwriting the file  |
| mv *.png ~/<dir>                       | Move all PNG files from current folder to a different folder  |
| <b>Command History</b>                 |   |

| Command                              | Action  |
|--------------------------------------|---|
| Ctrl + R                             | Search through previously used commands   |
| history n                            | Shows the previous commands you've typed. Add a number to limit to the last n items   |
| ![value]                             | Execute the last command typed that starts with a value   |
| !!                                   | Execute the last command typed  |
| <b>Permissions</b>                   |   |
| ls -ld                               | Display the default permission for a home directory   |
| ls -ld/<dir>                         | Display the read, write, and access permission of a particular folder   |
| chmod 755 <file>                     | Change the permission of a file to 755  |
| chmod -R 600 <dir>                   | Change the permission of a folder (and its contents) to 600   |
| chown <user>:<group> <file>          | Change the ownership of a file to user and group. Add -R to include folder contents   |
| <b>Processes</b>                     |   |
| ps -ax                               | Output currently running processes. Here, a shows processes from all users and x shows processes that are not connected with the Terminal |
| ps -aux                              | Shows all the processes with %cpu, %mem, page in, PID, and command  |
| top                                  | Display live information about currently running processes  |
| top -ocpu -s 5                       | Display processes sorted by CPU usage, updating every 5 seconds   |
| top -o rsize                         | Sort top by memory usage  |
| kill PID                             | Quit process with ID <PID>. You'll see PID as a column in the Activity Monitor  |
| ps -ax   grep <appname>              | Find a process by name or PID   |
| <b>Network</b>                       |   |
| ping <host>                          | Ping host and display status  |
| whois <domain>                       | Output whois info for a domain  |
| curl -O <url/to/file>                | Download file via HTTP, HTTPS, or FTP   |
| ssh <username>@<host>                | Establish SSH connection to <host> with user <username>   |
| scp <file><user>@<host>:/remote/path | Copy <file> to a remote <host>  |
| <b>Homebrew</b>                      |   |
| brew doctor                          | Check brew for potential problems   |
| brew install <formula>               | Install a formula   |
| brew uninstall <formula>             | Uninstall a formula   |
| brew list                            | List all the installed formulas   |
| brew search                          | Display available formulas for brewing  |
| brew upgrade                         | Upgrade all outdated and unpinned brews   |
| brew update                          | Fetch latest version of homebrew and formula  |
| brew cleanup                         | Remove older version of installed formula   |
| brew tap homebrew/cask               | Tap the cask repository from GitHub   |
| brew cask list                       | List all installed casks  |
| brew cask install <cask>             | Install the given cask  |
| brew cask uninstall <cask>           | Uninstall the given cask  |
| <b>Search</b>                        |   |
| find <dir> -name "<file>"            | Find all files named <file> inside <dir>. Use wildcards (*) to search for partial filenames   |
| grep "<text>" <file>                 | Output all occurrences of <text> inside <file> (add -i for case insensitivity)  |
| grep -rl "<text>" <dir>              | Search for all files containing <text> inside <dir>   |
| <b>Output</b>                        |   |
| cat <file>                           | Output the content of <file>  |

| Command          | Action  |
|------------------|---|
| less <file>      | Output the contents of <file> using the less command that supports pag and more |
| head <file>      | Output the first 10 lines of <file>   |
| <cmd> > > <file> | Appends the output of <cmd> to <file>   |
| <cmd> > <file>   | Direct the output of <cmd> into <file>  |
| <cmd1>   <cmd2>  | Direct the output of <cmd1> to <cmd2>   |