macOS Shell Commands

Here are 200 commonly used macOS shell commands, categorized for easier reference. These commands are useful for navigating the file system, managing files, system monitoring, and more.

File System Navigation

- `ls` - List directory contents.
- `cd` - Change the current directory.
- `pwd` - Print the current working directory.
- `tree` - Display directories as trees (if installed).

File Operations

- `cp` - Copy files or directories.
- `mv` - Move or rename files or directories.
- `rm` - Remove files or directories.
- `touch` - Create an empty file or update the timestamp.
- `mkdir` - Create a new directory.
- `rmdir` - Remove an empty directory.
- `ln` - Create hard and symbolic links.
- `chmod` - Change file permissions.
- `chown` - Change file owner and group.
- `cat` - Concatenate and display file content.
- `less` - View file content page by page.
- `more` - View file content page by page.
- `head` - Display the first lines of a file.
- `tail` - Display the last lines of a file.
- `nano` - Edit text files.
- `vi` - Edit text files.
- `vim` - Edit text files (enhanced version of `vi`).
- `find` - Search for files in a directory hierarchy.
- `locate` - Find files by name quickly.
- `grep` - Search text using patterns.
- `diff` - Compare files line by line.
- `file` - Determine file type.
- `stat` - Display file or file system status.
- `du` - Estimate file space usage.
- `df` - Report file system disk space usage.
- `dd` - Convert and copy a file.

- `tar` - Store, list, or extract files in an archive.
- `gzip` - Compress or decompress files.
- `gunzip` - Decompress files compressed with gzip.
- `zip` - Package and compress files.
- `unzip` - Extract compressed files in a ZIP archive.
- `rsync` - Remote file and directory synchronization.
- `scp` - Secure copy files between hosts.
- `curl` - Transfer data from or to a server.
- `wget` - Download files from the web.

System Information

- `uname` - Print system information.
- `top` - Display system processes.
- `htop` - Interactive process viewer (if installed).
- `ps` - Report a snapshot of current processes.
- `kill` - Send a signal to a process.
- `killall` - Kill processes by name.
- `bg` - Run jobs in the background.
- `fg` - Run jobs in the foreground.
- `jobs` - List active jobs.
- `nice` - Run a program with modified scheduling priority.
- `renice` - Alter priority of running processes.
- `time` - Time a command's execution.
- `uptime` - Show how long the system has been running.
- `who` - Show who is logged on.
- `w` - Show who is logged on and what they are doing.
- `whoami` - Print the current user name.
- `id` - Print user and group information.
- `groups` - Print the groups a user is in.
- `passwd` - Change user password.
- `sudo` - Execute a command as another user.
- `su` - Switch user.
- `chroot` - Run a command with a different root directory.
- `hostname` - Show or set the system's host name.
- `ifconfig` - Configure a network interface.
- `ping` - Send ICMP ECHO_REQUEST to network hosts.
- `traceroute` - Trace the route to a network host.
- `netstat` - Network statistics.
- `route` - Show or manipulate the IP routing table.

- `dig` - DNS lookup utility.
- `nslookup` - Query Internet name servers interactively.
- `host` - DNS lookup utility.
- `ftp` - Internet file transfer program.
- `ssh` - OpenSSH SSH client.
- `telnet` - User interface to the TELNET protocol.
- `nc` - Netcat, arbitrary TCP and UDP connections and listens.
- `iftop` - Display bandwidth usage on an interface (if installed).
- `nmap` - Network exploration tool and security/port scanner (if installed).

Disk Management

- `mount` - Mount a filesystem.
- `umount` - Unmount a filesystem.
- `fdisk` - Partition table manipulator for Linux.
- `mkfs` - Build a Linux filesystem.
- `fsck` - Check and repair a Linux filesystem.
- `df` - Report file system disk space usage.
- `du` - Estimate file space usage.
- `sync` - Synchronize cached writes to persistent storage.
- `dd` - Convert and copy a file.
- `hdparm` - Get/set hard disk parameters.
- `smartctl` - Control and monitor SMART-enabled ATA/SCSI-3 drives (if installed).

Package Management

- `brew` - Homebrew package manager (if installed).
- `port` - MacPorts package manager (if installed).
- `gem` - RubyGems package manager.
- `pip` - Python package installer.
- `npm` - Node.js package manager.
- `cpan` - Perl package manager.

Text Processing

- `awk` - Pattern scanning and processing language.
- `sed` - Stream editor for filtering and transforming text.
- `sort` - Sort lines of text files.
- `uniq` - Report or omit repeated lines.
- `cut` - Remove sections from each line of files.

- `paste` - Merge lines of files.
- `join` - Join lines of two files on a common field.
- `tr` - Translate or delete characters.
- `iconv` - Convert text from one encoding to another.
- `strings` - Find printable strings in files.
- `wc` - Print newline, word, and byte counts for each file.
- `nl` - Number lines of files.
- `od` - Dump files in various formats.
- `xxd` - Make a hexdump or do the reverse.

Shell Scripting

- `echo` - Display a line of text.
- `printf` - Format and print data.
- `test` - Evaluate an expression.
- `expr` - Evaluate expressions.
- `read` - Read a line from standard input.
- `export` - Set an environment variable.
- `unset` - Unset values and attributes of shell variables and functions.
- `alias` - Create an alias for a command.
- `unalias` - Remove an alias.
- `source` - Execute commands from a file in the current shell.
- `exec` - Execute a command.
- `trap` - Trap signals and other events.
- `set` - Set or unset shell options and positional parameters.
- `shift` - Shift positional parameters.
- `getopts` - Parse positional parameters.
- `type` - Describe a command.
- `which` - Locate a command.
- `whereis` - Locate the binary, source, and manual page files for a command.

Development Tools

- `gcc` - GNU project C and C++ compiler.
- `make` - Directory-oriented makefile processor.
- `cmake` - Cross-platform makefile generator.
- `autoconf` - Generate configure scripts.
- `automake` - Generate Makefile.in files.
- `ld` - The GNU linker.
- `ar` - Create, modify, and extract from archives.

- `nm` - List symbols from object files.
- `objdump` - Display information from object files.
- `strip` - Discard symbols from object files.
- `ranlib` - Generate index to archive.
- `gdb` - The GNU debugger.
- `lldb` - The LLVM debugger.
- `valgrind` - Instrumentation framework for building dynamic analysis tools (if installed).
- `strace` - Trace system calls and signals (if installed).
- `ltrace` - Trace library calls (if installed).
- `perf` - Performance analysis tools for Linux.
- `time` - Time a command's execution.
- `xargs` - Build and execute command lines from standard input.
- `m4` - Macro processor.
- `cpp` - The C Preprocessor.
- `flex` - Fast Lexical Analyzer generator.
- `bison` - Yacc-compatible parser generator.
- `bc` - An arbitrary precision calculator language.
- `dc` - An arbitrary precision calculator.

Version Control

- `git` - Distributed version control system.
- `svn` - Subversion version control system.
- `hg` - Mercurial distributed version control system.
- `cvs` - Concurrent Versions System.

Miscellaneous

- `man` - Format and display the online manual pages.
- `info` - Read Info documents.
- `apropos` - Search the manual page names and descriptions.
- `whatis` - Display one-line manual page descriptions.
- `history` - Display or manipulate the history list.
- `yes` - Output a string repeatedly until killed.
- `cal` - Display a calendar.
- `date` - Display or set the date and time.
- `sleep` - Delay for a specified amount of time.
- `watch` - Execute a program periodically, showing output fullscreen.
- `xargs` - Build and execute command lines from standard input.
- `seq` - Print a sequence of numbers.

- `shuf` - Generate random permutations.
- `tee` - Read from standard input and write to standard output and files.
- `tput` - Initialize a terminal or query terminfo database.
- `stty` - Change and print terminal line settings.
- `clear` - Clear the terminal screen.
- `reset` - Reset the terminal to a sane state.
- `script` - Make typescript of terminal session.
- `wall` - Write a message to all users.
- `write` - Send a message to another user.
- `mesg` - Control write access to your terminal.
- `talk` - Talk to another user.
- `ytalk` - Yet another talk program (if installed).
- `crontab` - Maintain crontab files for individual users.
- `at` - Schedule commands to be executed once at a later time.
- `batch` - Schedule commands to be executed in a batch queue.
- `nice` - Run a program with modified scheduling priority.
- `renice` - Alter priority of running processes.
- `time` - Time a command's execution.
- `ulimit` - Set or report user resource limits.
- `pr` - Convert text files for printing.
- `lp` - Send files to a printer.
- `lpr` - Print files.
- `lpq` - Show printer queue status.
- `lprm` - Remove jobs from the printer queue.
- `enscript` - Convert text to PostScript, HTML, or RTF, with syntax highlighting (if installed).
- `a2ps` - Any to PostScript filter.
- `ps2pdf` - Convert PostScript to PDF.
- `pdf2ps` - Convert PDF to PostScript.
- `gs` - Ghostscript interpreter.
- `convert` - Convert between image formats (if installed).
- `mogrify` - Resize, rotate, and transform images (if installed).
- `exiftool` - Read, write, and edit meta information in files (if installed).
- `jpegoptim` - Optimize JPEG files (if installed).
- `optipng` - Optimize PNG files (if installed).

These commands cover a wide range of functionalities and are essential for users who want to efficiently manage and interact with their macOS system through the terminal.