

# Windows CMD Cheatsheet

## Basic Navigation and File Operations

- **cd**: Change directory (`cd ..`: parent, `cd /d D:`: change drive and directory).
- **dir**: List files and directories in the current path.
- **path**: Display or set the executable search path.
- **mkdir / md**: Create a new directory.
- **rmdir / rd**: Remove a directory (`/s`: including subdirectories).
- **copy [src] [dest]**: Copy files.
- **xcopy**: Copy files and directory trees (advanced version of copy).
- **robocopy**: Robust file copy (Standard for large transfers and syncing).
- **move [src] [dest]**: Move or rename files/directories.
- **del / erase**: Delete one or more files.
- **type [file]**: Display the contents of a text file.
- **ren / rename**: Rename a file or directory.

## System and Disk Information

- **systeminfo**: Displays detailed configuration information about the PC.
- **ver**: Displays the Windows version.
- **hostname**: Displays the computer's network name.
- **tasklist**: Displays a list of currently running processes.
- **taskkill /pid [ID]**: Terminate a process by its ID (`/f`: force).
- **chkdsk**: Checks a disk and displays a status report.
- **diskpart**: Advanced disk partitioning utility.
- **format [drive]**: Formats a disk for use with Windows.

## Network Commands

- **ipconfig**: Displays all current TCP/IP network configuration values (`/all`: detailed).
- **ping [host]**: Verifies connectivity to a network host.
- **tracert [host]**: Traces the route taken to a network host.

- **netstat**: Displays active TCP connections and listening ports.
- **nslookup**: Queries DNS to find IP addresses or domain names.
- **getmac**: Displays the MAC addresses of network adapters.
- **net share**: Displays information about all shared resources on the computer.

## File Permissions and Attributes

- **attrib**: Displays or changes file attributes (Read-only, Hidden, etc.).
  - **attrib +h file**: Hide a file.
- **icacls**: Display or modify Access Control Lists (ACLs) for files and directories.

## Advanced Utilities

- **sfc /scannow**: Scans and repairs corrupted system files.
- **dism**: Deployment Image Servicing and Management tool (System repair).
- **assoc**: Displays or modifies file extension associations.
- **ftype**: Displays or modifies file types used in extension associations.
- **where [pattern]**: Finds files that match a pattern within the PATH.

## Environment Variables and Scripts

- **set**: Displays, sets, or removes environment variables for the current session.
- **setx**: Sets environment variables permanently (user or system level).
- **%VAR\_NAME%**: Syntax to access a variable.
- **echo %PATH%**: Print the PATH variable.

## Redirection and Pipes

- **>**: Redirect output to a file (overwrite).
- **>>**: Append output to a file.
- **|**: Pipe output from one command to another.
- **&**: Run multiple commands in sequence.
- **&&**: Run the second command ONLY if the first succeeded.

- **||**: Run the second command ONLY if the first failed.

## Pro Tips

### Run as Administrator

Many system-level commands (e.g., `sfc`, `dism`, `netsh`) require elevated privileges. Right-click the Command Prompt and select "Run as Administrator".

### Command History

Press **F7** in the command prompt to see a popup list of your previous commands.

### Auto-completion

Press **Tab** to automatically complete file or directory names as you type.