

Windows Commands

The Windows Command Line (often referred to as Command Prompt or cmd) is a text-based interface that allows users to interact directly with the Windows operating system by typing commands. Instead of clicking through menus and icons, users enter structured instructions that the system executes immediately.

While modern versions of Windows provide a robust graphical user interface (GUI), the command line remains a powerful and essential tool for IT professionals, developers, cybersecurity specialists, and system administrators. Many administrative, troubleshooting, networking, and scripting tasks can be performed faster — and sometimes exclusively — through the command line.

This handout is intended to be a quick reference guide for commonly used Windows Command line commands. It is not intended to replace textbook or course materials. It may be useful to keep this sheet nearby during labs and practice sessions.

Windows Command lines will often require parameters to specify details, such as file locations, or they may need flags to control options, such as to search recursively in a directory or not. Where parameters are needed, there will be placeholders presented to indicate that the user must supply the information needed. For example, a command might show “MAKEDIR <directory path or name>”. In practice, the user would need to substitute the desired file path or directory name for <directory path or name>. When the command uses flags to control different options, there will be a list of the flags and options located below the explanation of the command itself.

File and Directory commands

The commands listed in this section are used for viewing file information and content, directories, and directory contents.

Command	Description
pwd	Displays the path of the current working directory.
dir	View the directory from the current working directory.

Flags for the **dir** command:

- **/A:D** - displays only directories, excludes files from output.
- **/A:-D** displays only files, excludes directories from output.
- **/A:H** displays hidden files and directories.

Command	Description
find <flags><term><file>	Searches for <term> in <file>.

Flags for **find** command:

- **/V** - displays all lines not containing the specified <term>.
- **/C** - displays only the count of the lines containing <term>.
- **/N** - Displays line numbers with the displayed lines.
- **/I** - Ignores the case of characters when searching for the <term>.

Command	Description
MD <name or path>	Creates a new directory at path or in current working directory.
MKDIR <name or path>	Alias for MD command.
MAKEDIR <name or path>	Alias for MD command.
COPY<SRC><DEST>	Copies SRC file to DEST location. SRC must be a file. DEST may be a file or directory.
MOVE <SRC><DEST>	Moves the <SRC> to <DEST>.
LS	Lists the contents of current working directory.

Flags for the LS command:

- `-la` – includes information about the contents of the current working directory.

Command	Description
<code>grep -rl "<text>"<file></code>	Outputs all occurrences of <text> from <file>.
<code>cat <file></code>	Displays the contents of <file>.
<code>less <file></code>	Displays the content of <file> with support for pagination.
<code><cmd><file></code>	Runs <cmd> and directs the output of it to <file>.
<code>clear</code>	Clears the content of the command window.
<code>touch <file></code>	Updates <file>.
<code>rm <file or directory></code>	Deletes <file> or <directory>. Directory must be empty.

Flags for the rm command:

- `-r <directory>` – deletes contents of directory and directory.
- `-f <file>` - force deletions of <file>

File Management and Ownership commands

The commands listed in this section are used for controlling file access, and file content.

Command	Description
<code>cat <file></code>	Displays the contents of <file>.
<code>less <file></code>	Displays the content of <file> with support for pagination.
<code><cmd><file></code>	Runs <cmd> and directs the output of it to <file>.
<code>clear</code>	Clears the content of the command window.
<code>touch <file></code>	Updates <file>.
<code>rm <file or directory></code>	Deletes <file> or <directory>. Directory must be empty.
<code>chmod <permission><file></code>	Changes the permissions of <file> to <permission>.
<code>chown <user><group><file></code>	Changes the owner of <file> to <user> and <group>

Networking and Remote Interface commands

The commands listed in this section are used for network trouble shooting and accessing remote systems and resources.

Command	Description
<code>ping <host></code>	Pings <host> and display result of ping.
<code>whois <domain></code>	Outputs WHOIS registration information for <domain>.
<code>curl <url to file></code>	Downloads file from <url to file>
<code>ssh <username>@<host></code>	Establishes a secure shell connection to <host> using the <username> login.
<code>arp -a</code>	Displays entries in arp table.

The Academic Center for Excellence (ACE) offers free on-campus and online tutoring appointments for software design. Additional programming resources are available on the [Academic Center for Excellence website](#). For further assistance with programming concepts, please call ACE at (540) 891-3017 or email ACE@germanna.edu.