To effectively use the Command Prompt (CMD) in Windows, here's what you should know:

1. Basic Commands:

- **`dir`**: Lists the files and directories in the current directory.
- **`cd [directory]`**: Changes the current directory to the specified directory.
- **`cd ..`**: Moves up one directory level.
- **`mkdir [directory_name]`**: Creates a new directory.
- **`rmdir [directory_name]`**: Removes a directory.
- **`del [file_name]`**: Deletes a file.
- **`copy [source] [destination]`**: Copies files from one location to another.
- **`move [source] [destination]`**: Moves files from one location to another.
- **`ren [old_name] [new_name]`**: Renames a file or directory.
- **`cls`**: Clears the screen.
- **`exit`**: Closes the Command Prompt window.

2. Navigation:

- **Absolute Path**: The full path from the root directory (e.g., `C:\Users\Username\Documents`).
- **Relative Path**: The path relative to the current directory (e.g., `..\Documents`).

3. Working with Files and Directories:

- **`type [file_name]`**: Displays the content of a file.
- **`more [file_name]`**: Displays the content of a file one screen at a time.
- **`attrib [file_name]`**: Displays or changes file attributes (e.g., hidden, read-only).

4. System Information Commands:

- **`ipconfig`**: Displays network configuration details.
- **`ping [address]`**: Tests the connectivity to a specific address.
- **`tasklist`**: Lists all running processes.
- **`taskkill /im [process_name] /f`**: Kills a process by name.
- **`systeminfo`**: Displays detailed configuration information about your system.
- **`hostname`**: Displays the computer's hostname.
- **`chkdsk`**: Checks the disk for errors.
- **`sfc /scannow`**: Scans and repairs system files.

5. Command Operations:

- **Pipes (`|`)**: Sends the output of one command as input to another (e.g., `dir | more`).

- **Redirection (`>`, `>>`)**: Redirects output to a file instead of the screen (e.g., `dir > filelist.txt`).
- **Wildcards (`*`, `?`)**: Used for pattern matching in file names (e.g., `dir *.txt` lists all `.txt` files).

6. Batch Files:

- **Creating a Batch File**: A batch file (.bat) is a script that contains a series of commands. You can create it using a text editor and save it with a `.bat` extension.
- **Running a Batch File**: Simply type the name of the batch file in CMD (e.g., `myscript.bat`).

7. Advanced Commands:

- **`xcopy [source] [destination] /s /e`**: Copies files and directories, including subdirectories.
- **`robocopy [source] [destination] [options]`**: A more powerful file and directory copy tool.
- **`shutdown /s /t [seconds]`**: Shuts down the computer after a specified time.
- **`shutdown /r /t [seconds]`**: Restarts the computer after a specified time.
- **`netstat`**: Displays network connections, routing tables, and interface statistics.
- **`taskmgr`**: Opens the Task Manager.

8. Customization and Settings:

- **Command History**: Use the **up/down arrow keys** to scroll through previous commands.
- **`doskey /history`**: Displays the command history.
- **Tab Completion**: Start typing a file or directory name, then press **Tab** to auto-complete.
- **Changing the Prompt**: Use `prompt [text]` to change the appearance of the command prompt (e.g., `prompt $P$G` for the default prompt).

9. Help and Documentation:

- **`help`**: Lists all available commands with a brief description.
- **`[command] /?`**: Displays detailed help for a specific command (e.g., `xcopy /?`).

10. Safety Tips:

- **Run as Administrator**: Some commands require elevated privileges. Right-click on CMD and select "Run as administrator."
- **Backup**: Be careful with commands like `del`, `rmdir`, and `format` as they can delete data permanently.

- **Experiment**: CMD can be powerful, so it's good to experiment in a safe environment to learn more about its capabilities.