



## Basic Navigation

### Essential Navigation Shortcuts

<code>cd</code>	Change directory to home directory.
<code>cd &lt;directory&gt;</code>	Change directory to <code>&lt;directory&gt;</code> .
<code>cd ..</code>	Move one directory up.
<code>cd -</code>	Go to the previous directory.
<code>pwd</code>	Print working directory (current directory path).
<code>ls</code>	List files and directories in the current directory.
<code>ls -l</code>	List files with detailed information (permissions, size, date).
<code>ls -a</code>	List all files, including hidden files (files starting with <code>.</code> ).
<code>ls -t</code>	Sort files by modification time (newest first).

## Shell Shortcuts and Commands

### Command Line Editing

Ctrl + A	Move cursor to the beginning of the line.
Ctrl + E	Move cursor to the end of the line.
Ctrl + K	Cut the line from the cursor position to the end.
Ctrl + U	Cut the line from the cursor position to the beginning.
Ctrl + Y	Paste the last cut text (yank).
Ctrl + R	Search command history.
Ctrl + W	Cut the word before the cursor.
Alt + F	Move cursor forward one word.
Alt + B	Move cursor backward one word.

## System Information and Control

### System Information

<code>uname -a</code>	Display kernel information.
<code>uptime</code>	Show how long the system has been running.
<code>df -h</code>	Display disk space usage.
<code>free -m</code>	Display memory usage.
<code>whoami</code>	Display the current username.
<code>date</code>	Display the current date and time.
<code>cal</code>	Display the calendar.
<code>history</code>	Display command history.
<code>echo \$&lt;variable&gt;</code>	Display the value of the variable.

### File and Directory Management

<code>mkdir &lt;directory&gt;</code>	Create a new directory named <code>&lt;directory&gt;</code> .
<code>rmdir &lt;directory&gt;</code>	Remove an empty directory.
<code>rm -r &lt;directory&gt;</code>	Recursively remove a directory and its contents (use with caution!).
<code>touch &lt;file&gt;</code>	Create an empty file or update the timestamp of an existing file.
<code>cp &lt;source&gt; &lt;destination&gt;</code>	Copy a file or directory from <code>&lt;source&gt;</code> to <code>&lt;destination&gt;</code> .
<code>mv &lt;source&gt; &lt;destination&gt;</code>	Move or rename a file or directory.
<code>rm &lt;file&gt;</code>	Remove a file.
<code>ln -s &lt;source&gt; &lt;link&gt;</code>	Create a symbolic link named <code>&lt;link&gt;</code> pointing to <code>&lt;source&gt;</code> .
<code>find . -name "&lt;filename&gt;"</code>	Finds file with the filename from the current directory.

### Process Management

Ctrl + C	Terminate the current process.
Ctrl + Z	Suspend the current process (send it to the background).
<code>fg</code>	Bring the last suspended process to the foreground.
<code>bg</code>	Run the last suspended process in the background.
<code>jobs</code>	List all background jobs.
<code>kill %&lt;job_number&gt;</code>	Kill a specific background job.
<code>ps</code>	Display currently running processes.
<code>top</code>	Display dynamic real-time view of running processes.
<code>kill &lt;pid&gt;</code>	Kill a process by its process ID (PID).

### System Control

<code>sudo shutdown -h now</code>	Shut down the system immediately (requires sudo).
<code>sudo reboot</code>	Reboot the system (requires sudo).
<code>exit</code>	Close the current terminal.
Ctrl + D	Close the current terminal (alternative to <code>exit</code> ).
<code>passwd</code>	Change user password.
<code>clear</code>	Clear the terminal screen.
<code>logout</code>	Logs out the current user.

## File Operations and Permissions

### File Content Viewing

<code>cat &lt;file&gt;</code>	Display the entire content of a file.
<code>less &lt;file&gt;</code>	View file content page by page. Use arrow keys to navigate, <code>q</code> to quit.
<code>head &lt;file&gt;</code>	Display the first 10 lines of a file.
<code>tail &lt;file&gt;</code>	Display the last 10 lines of a file.
<code>tail -f &lt;file&gt;</code>	Display the last 10 lines and follow the file for new content (useful for log files).
<code>nl &lt;file&gt;</code>	Display file content with line numbers.

### File Permissions

<code>chmod &lt;permissions&gt; &lt;file&gt;</code>	Change file permissions. <code>&lt;permissions&gt;</code> can be in octal (e.g., <code>755</code> ) or symbolic (e.g., <code>u+rx,go+rx</code> ).
<code>chown &lt;user&gt;:&lt;group&gt; &lt;file&gt;</code>	Change file ownership. <code>user</code> is the new owner, <code>group</code> is the new group.
<code>umask</code>	Show the current umask value. This determines default file permissions for newly created files and directories.
<code>sudo chmod 777 &lt;file&gt;</code>	Grants read, write, and execute permissions to everyone (use with extreme caution).
<code>sudo chown &lt;user&gt;:&lt;group&gt; &lt;file&gt;</code>	Example to change file owner and group of file.
<code>stat &lt;file&gt;</code>	Displays status and details about the file.