

# Cheat sheet\*

Jeroen F.J. Laros

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## Basic terminal shortcuts

CTRL-L	Clear the terminal.
CTRL-D	Logout.
SHIFT PgUp/PgDn	Scroll up/down.
CTRL-A	Cursor to start of line.
CTRL-E	Cursor the end of line.
CTRL-U	Delete left of the cursor.
CTRL-K	Delete right of the cursor.
CTRL-W	Delete word on the left.
CTRL-Y	Paste (after CTRL U,K or W).
TAB	Auto completion of file or command.
CTRL-R	Reverse search history.
!!	Repeat last command.
CTRL-C	Stops the current command.
CTRL-Z	Suspends the current command <sup>1</sup> .

## Basic terminal navigation

ls -a	List all files and folders.
ls <foldername>	List files in folder.
ls -lh	Detailed list, human readable.
ls -l *.jpg	List JPEG files only.
ls -lh <filename>	Result for file only.
cd <foldername>	Change folder <sup>2</sup> .
cd /	Go to the root folder.
cd ..	Go up one folder <sup>3</sup> .
du -h	Disk usage of folders, human readable.
du -ah	Disk usage of files and folders, human readable.
du -sh	Summarise disk usage for the current folder.
pwd	Print working folder.

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\*Adapted from [http://cli.learncodethehardway.org/bash\\_cheat\\_sheet.pdf](http://cli.learncodethehardway.org/bash_cheat_sheet.pdf)

<sup>1</sup>Resume with **fg** in foreground or **bg** in background

<sup>2</sup>If folder name has spaces use " "

<sup>3</sup>Tip: ../../../../

## Basic file manipulation

<code>cat &lt;filename&gt;</code>	Show content of a file.
<code>more &lt;filename&gt;</code>	Navigate through a file per page.
<code>less &lt;filename&gt;</code>	Navigate through a file.
<code>head -&lt;lines&gt; &lt;filename&gt;</code>	Show the first lines.
<code>tail -&lt;lines&gt; &lt;filename&gt;</code>	Show the last lines.
<code>mkdir &lt;foldername&gt;</code>	Create a new folder.
<code>cp &lt;filename&gt; &lt;filename2&gt;</code>	Copy and rename a file.
<code>cp &lt;filename&gt; &lt;foldername&gt;</code>	Copy a file to a folder.
<code>cp -R &lt;foldername&gt; &lt;foldername2&gt;</code>	Copy and rename a folder.
<code>cp *.txt &lt;foldername&gt;</code>	Copy *.txt to a folder.
<code>mv &lt;filename&gt; &lt;foldername&gt;</code>	Move a file to a folder.
<code>mv &lt;foldername&gt; &lt;foldername2&gt;</code>	Move a folder to a folder or rename a folder <sup>4</sup> .
<code>mv &lt;filename&gt; &lt;filename2&gt;</code>	Rename a file.
<code>mv &lt;foldername&gt; ..</code>	Move a folder up in hierarchy.
<code>rm &lt;filename&gt;</code>	Delete a file.
<code>rm -i &lt;filename&gt;</code>	Ask for confirmation before removing a file.
<code>rm -f &lt;filename&gt;</code>	Force deletion of a file.
<code>rm -r &lt;foldername&gt;</code>	Delete a folder.
<code>touch &lt;filename&gt;</code>	Create or update a file.
<code>ln &lt;filename&gt; &lt;filename2&gt;</code>	Create a hard link <sup>5</sup> .
<code>ln -s &lt;filename&gt; &lt;filename2&gt;</code>	Create a symbolic link.

## Extract, sort and filter data

<code>grep &lt;text&gt; &lt;filename&gt;</code>	Search for text in a file.
<code>grep -i &lt;text&gt; &lt;filename&gt;</code>	Search for text in a file, not case sensitive.
<code>grep -I &lt;text&gt; &lt;filename&gt;</code>	Search for text in a file, exclude binary files.
<code>grep -r &lt;text&gt; &lt;foldername&gt;</code>	Search for text in all files in a folder.
<code>sort &lt;filename&gt;</code>	Sort the content of a file.
<code>sort -o &lt;filename&gt; &lt;filename2&gt;</code>	Write sorted result to a file.
<code>sort -r &lt;filename&gt;</code>	Sort in reverse.
<code>sort -R &lt;filename&gt;</code>	Sort randomly.
<code>sort -n &lt;filename&gt;</code>	Sort numerically, not alphabetically.
<code>wc -l &lt;filename&gt;</code>	Count the number of lines.
<code>wc -w &lt;filename&gt;</code>	Count the number of words.
<code>wc -c &lt;filename&gt;</code>	Count the number of bytes.
<code>wc -m &lt;filename&gt;</code>	Count the number of characters.
<code>cut -c &lt;range&gt; &lt;filename&gt;</code>	Select parts from each line of a file <sup>6</sup> .
<code>cut -d &lt;delimiter&gt; -f &lt;field&gt;</code>	Cut based on fields <sup>7</sup> .

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<sup>4</sup>If foldername2 exists, it moves, otherwise it renames.

<sup>5</sup>Can only be used on the same filesystem.

<sup>6</sup>`cut -c 2-5 names.txt` cuts the characters at position 2 to 5 of each line.

<sup>7</sup>Good for csv files.

## Execute programs in the background

<code>&lt;command&gt; &amp;</code>	Run command in the background <sup>8</sup> .
<code>nohup &lt;command&gt;</code>	Keep running in the background even after closing the terminal <sup>9</sup> .
<code>jobs</code>	List background jobs.
<code>fg &lt;jobid&gt;</code>	Run a background process in the foreground <sup>10</sup> .
<code>bg &lt;jobid&gt;</code>	Run a suspended process in the background.

## Process management

<code>w</code>	Shows who is logged in and what they are doing.
<code>ps -u</code>	Processes from current user.
<code>top</code>	Dynamic process list <sup>11</sup> .
<code>kill &lt;PID&gt;</code>	Kill a process <sup>12</sup> .
<code>killall &lt;processname&gt;</code>	Kill multiple processes by name.

## Flow redirection

<code>&lt;command&gt; &gt; &lt;filename&gt;</code>	Redirect standard output to file.
<code>&lt;command&gt; &gt;&gt; &lt;filename&gt;</code>	Append standard output to file.
<code>&lt;command&gt; 2&gt; &lt;filename&gt;</code>	Redirect standard error to file.
<code>&lt;command&gt; 2&gt;&amp;1</code>	Combine standard output and standard error.
<code>&lt;command&gt;   &lt;command2&gt;</code>	Use the output of one command as the input of another.

## Archive and compress data

<code>tar -cvf &lt;filename&gt; &lt;foldername&gt;</code>	Make a <code>tar</code> archive containing all files in a folder.
<code>tar -xvf &lt;filename&gt; &lt;foldername&gt;</code>	Extract a <code>tar</code> archive.
<code>tar -tf &lt;filename&gt;</code>	Show the content of a <code>tar</code> archive.
<code>tar -rvf &lt;filename&gt; &lt;filename2&gt;</code>	Add a file to a <code>tar</code> archive.
<code>gzip &lt;filename&gt;</code>	Compress a file.
<code>gunzip &lt;filename&gt;</code>	Decompress a file.
<code>bzip2 &lt;filename&gt;</code>	Compress a file <sup>13</sup> .
<code>bunzip2 &lt;filename&gt;</code>	Decompress a file.
<code>zcat &lt;filename&gt;</code>	Show content of a <code>gz</code> file.
<code>zmore &lt;filename&gt;</code>	Navigate through a file per page.
<code>zless &lt;filename&gt;</code>	Navigate through a file.
<code>bzcat &lt;filename&gt;</code>	Show content of a <code>bz2</code> file.
<code>bzmore &lt;filename&gt;</code>	Navigate through a file per page.
<code>bzless &lt;filename&gt;</code>	Navigate through a file.

## Miscellaneous

`man <command>` Show the manual of a command.

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<sup>8</sup>`cp <filename> . &`

<sup>9</sup>`nohup cp <filename> .`

<sup>10</sup>Get the job ID using `jobs`.

<sup>11</sup>Press `q` to close.

<sup>12</sup>Get the PID using `ps`.

<sup>13</sup>`bzip` compresses better, but is a lot slower.