

General Advice

💡 **Use the tab-completion:** Tab and double Tab
 💡 **Use the history:** ↑ and ↓ and ctrl+r
CMD = any command
TXT = any text; escape special chars with \ or " ' or '
FILE = any file name including the path (full/relative) to this file
PATH = a *FILE* or a directory accordingly
 [] = an argument to a *CMD* which is optional

Get Help

whatis *CMD* display one-line descriptions of *CMD*
CMD -h (or -?, -help, --help, --usage) displays the help message of *CMD*
man *CMD* displays the manual pages of *CMD* ⓘ
info *CMD* displays the info documents of *CMD* ⓘ
help *CMD* display information about the builtin *CMD*
apropos *TEXT* search the man pages for *TEXT*
groups *USER* shows all groups of *USER* (default is own)

Show File Content

head *FILE* print the first 10 lines of each *FILE*
head -n X *FILE* print the first X lines
tail *FILE* print the last 10 lines of each *FILE*
tail -n X *FILE* print the last X
less *FILE* display *FILE* on a page-by-page basis ⓘ
 | **less** display STDIN on a page-by-page basis ⓘ
cat *FILE* prints whole *FILE*
cat *FILE1 FILE2 > FILE3* cats *FILE1* and *FILE2* and prints them to *FILE3*

Rediretcs & Pipes & Subshell

CMD > FILE prints standard output of *CMD* to *FILE*, replacing it
CMD >> FILE prints standard output of *CMD* to *FILE*, appending it
CMD1 | CMD2 'pipes' standard out of *CMD1* as standard input to *CMD2*
CMD > out.log 2> err.log & runs *CMD* in background, prints standard out to out.log and standard error to err.log

Searching

grep *TXT FILES* search for pattern *TXT* in *FILES* (line-wise)
grep -r *TXT PATH* searches all files in *PATH* recursively
grep -v *TXT PATH* show lines not containing *TXT*
grep -c *TXT PATH* count matching lines instead of showing them
find [*PATH*] -name "*TXT*" finds all files named *TXT* in *PATH* (default .)
find [*PATH*] -iname "**TXT**" finds all files matching *TXT* case insensitive

Operate On Filesystem

pwd prints current directory
ls [*PATH*] list directory contents
ls -lart [*PATH*] long + hidden + reverse order + sort last modified
cd changes to HOME directory
cd *PATH* changes to *PATH* directory
mkdir *PATH* creates a directory
mkdir -p *PATH* creates also parents as needed
cp *FILE PATH* copies *FILE* to *PATH*
cp -r *PATH1 PATH2* cp recursively whole directory *PATH1* to *PATH2*
mv *PATH1 PATH2* moves file or dir *PATH1* to *PATH2*
rm *FILE* removes *FILE*
rm -r *PATH* removes files and dirs under *PATH* recursively
ln -s *PATH1* creates link of *PATH* with same name
ln -s *PATH1 TXT* creates link of *PATH* with new name *TXT*



Helpers

alias <i>TXT</i> =' <i>CMD</i> '	abbreviate <i>CMD</i> with <i>TXT</i>
★	alias ..='cd ..'
★	alias l='ls -lah'
<i>CMD</i> wc -l	prints number of lines <i>CMD</i> generates as output
<i>CMD</i> sort	sorts output of <i>CMD</i> alphabetical
<i>CMD</i> sort -n -k 3	sorts output of <i>CMD</i> numerical based on 3rd column
<i>CMD</i> uniq	only prints unique lines of <i>CMD</i> output

Archives & Compression

gunzip <i>FILE.gz</i>	uncompresses the <i>FILE.gz</i> in-place
unzip <i>FILE.zip</i>	uncompress and extracts the ZIP archive <i>FILE.zip</i>
tar -xvzf <i>FILE.tgz</i>	extracts + uncompress (gzip) the tarball <i>FILE.tgz</i>
tar -xvf <i>FILE.tar</i>	extracts the tarball <i>FILE.tar</i>
tar -cvzf <i>FILE.tgz</i> <i>PATH</i>	archives and compresses <i>PATH</i> into <i>FILE.tgz</i>

Permissions

chmod	change the permissions of FILE (or directory) to OCTAL
OCTAL	seperately for user, group and world by summing:
FILE	<ul style="list-style-type: none"> ⊕ 4 - read (r) ⊕ 2 - write (w) ⊕ 1 - execute (x)
	Example: chmod 750 == rwx for owner, rx for group, none for world

Process Control

top	displays realtime information about the top cpu processes
ps	report snapshot of processes (in current shell)
ps -lfu <i>USER</i>	show all processes of <i>USER</i> in details
kill <i>PID</i>	terminate the process with the process <i>IDPID</i>

Shortcuts

Ctrl + c	Interrupt/Kill whatever you are running (SIGINT)
Ctrl + z	Suspends current task (SIGTSTP).
	fg + Enter : resume process
	bg + Enter : continue process in background
Shift + PageUp	Scroll terminal window up
Shift + PageDown	Scroll terminal window down

Shortcuts (cursor movement)

Ctrl + a / Home	Go to beginning of the line
Ctrl + e / End	Go to the End of the line
Ctrl + f / →	Forward one character
Ctrl + b / ←	Backward one character
Ctrl + a	Delete current character
← Backspace	Delete previous character
Shift + Insert	Paste text

i Wildcards

*	replaces arbitrary number of characters
?	replaces exactly one character
[abc]	replaces exactly for a, b or c
[a-z]	replaces for any char from a to z

i Navigation (less, man, ...)

h	display help message
q	quit
space-bar PageDown	one page down
b PageUp	one page up
q	quit
/ <i>TXT</i>	search forward for <i>TXT</i>
? <i>TXT</i>	search backward for <i>TXT</i>
n	repeat previous search
N	repeat previous search in reverse direction
G	Go to last line
g	Go to first line