

The Linux Command Line Bootcamp

CHEATSHEET FOR COLT STEELE'S UDEMY COURSE
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- Getting Help

Display the manual page for a command
`man [command] ...`

The **man** pages are a built-in format of documentation. Each man page contains the synopsis of a command syntax. For instance, a simplified synopsis for the **sort** looks like
`sort [-n] [-h] [-k=number] [file] ...`

sort man page synopsis
`[-n]` the -n option is optional
`-k=number` the -k option expects an number
`[file] ...` more than one file can be provided

In summary, **sort** accepts optional argument -n, -h and -k, and -k expects a number, and we can provide more than one file to sort with.

Shortcuts for navigating man pages.
Q quit man page
B/F go back/forward a page
/PATTERN search for a pattern
H viewing all shortcuts

For certain shell builtins without a manual page entry, the **help** command can be used to generate a help page.

- Navigation

print name of current directory
`pwd`

list contents of a directory, default to current
`ls [dir]`

Options for ls
`-a` print files that begin with .
`-l` include permissions, file size and modification time
`-h` print human readable sizes

move into another directory
`cd [dir]`
Use `cd ..` to move up one level.
Refer to the root directory and user home directory with `/` and `~` respectively.

- Manipulating Files and Directories

Command	Meaning
create files: <code>touch</code>	
<code>touch [file] ...</code>	create files
<code>file [file] ...</code>	print file type
create directories: <code>mkdir</code>	
<code>mkdir [dir] ...</code>	make directories
<code>mkdir -p [dir] ...</code>	automatically make parent directories
copy files and directories: <code>cp</code>	
<code>cp [item1] [item2]</code>	copy a single file or directory item1 to item2
<code>cp [file] ... [dir]</code>	copy multiple files into a directory
move and rename files: <code>mv</code>	
<code>mv [item1] [item2]</code>	move or rename the file or directory item1 to item2
<code>mv [item].. [dir]</code>	move files from one directory to another
delete files and directories: <code>rm</code>	
<code>rm [item] ...</code>	remove files or empty directories

Options for rm		
Option	Long	Desc.
<code>-i</code>	<code>--interactive</code>	prompt before removal
<code>-r</code>	<code>--recursive</code>	allow removing non-empty directories
<code>-f</code>	<code>--force</code>	do not prompt

Recipe: remove all files with confirmation
`rm -i [dir]/*`

edit files with nano
`nano file` open file with nano
`nano +line file` open file at a line

nano shortcuts
`ctrl+O` write out
`ctrl+S` save
`ctrl+X` exit nano
`ctrl+W` search forward
`ctrl+\` replace
`M+\\, M+/
ctrl+A, ctrl+E move to the first/last line
..... move to the start/end of a line
Edit /etc/nanorc for furthur configuration.`

- File Manipulation Cont.

display file contents

Command	Meaning
cat [file] ...	outputs the concatenated result of multiple files
less [file]	displays file contents one page at a time
tac	prints files in reverse order (last line first)
rev	reverse lines characterwise.
Options for cat	
Option	Long Description
-n	--number number output lines
-s	--squeeze-black suppress repeated black lines
-A	--show-all show non-printable characters such as tabs and line endings

print first / last parts of files
The **head** and **tail** command prints the first/last ten lines of the given file. The number of lines can be adjusted with the `-n` option, or simply `-[number]`.

The `-f` option of **tail** views file contents in real time. This is useful for monitoring log files.

print line, word, byte counts
`wc [file] ...` prints newline, word, byte counts for each file and a total line of all files
To limit the output, use

- `-w`: print word counts
- `-l`: print line counts
- `-m`: print character counts
- `-c`: print byte counts

Recipe: count total lines of `.js` files
`wc -l *.js`

sort lines of fines
By default, `sort file` print each line from the specified file, sorted ini alphabetical order. It can also merge multiple files into one sorted whole via `sort file1 file2 ...`.

Options for sort		
Option	Long	Description
<code>-n</code>	<code>--numeric-sort</code>	compare based on string numerical value
<code>-h</code>	<code>--human-numeric-sort</code>	compare based on human readable numbers (e.g., 2k 1G)
<code>-k</code>	<code>--key=KEYDEF</code>	sort via a key
<code>-r</code>	<code>--reverse</code>	sort in reverse order
<code>-u</code>	<code>--unique</code>	sort unique values only

Recipe: find the top 10 biggest files inside a directory
`ls -lh [dir] | sort -rhk5 | head -10`