

# A Collection of Useful Shell Commands

## **Disclaimer**

Many of the following commands can be used on all Unix platforms. Some of them only work on MacOS, though.

## Basic navigation and file/directory management

Command	Meaning
cd	change directory
ls	list [-l] [-a]
pwd	present working directory
cp	copy
mv	move / rename
cat	show file content
less	show file content in separate window
grep	grep content from file, etc. (e.g. 'cat   grep -i #ignores cases')
awk	advanced tool to grap contents
echo "string" [ > file]	echo string to terminal [file]
	<b>overwrites existing content!</b>
touch [file1] ...	create one or multiple files very fast
mkdir	make directory
rmdir	remove directory
chown [username:usergroup] [file]	change ownership of particular file (e.g. 'chown root:root [file]')
chmod	change file permissions [+x] makes file executable [+w] makes file writable [+r] makes file readable
rm	remove [-rf]
adduser [new_user_name]	create new user and group
nano / vim / emacs	text editor
apt-get install / brew install	package manager
	pipe from standard output to command
>	write left into right (overwrites!)
> >	append left to right (does not overwrite!)
find [-name] [folder_name]	find a name
locate [name]	list all paths that contain [name]
updatedb	updates file system database (better run before every search)
history	shows bash history from ~/.bash_history
clear	clears screen be shifting it up
uname	[-a] shows host system
ps	shows running processes and pids
shutdown	shuts down the system after a short pause [-h now] or immediately
poweroff	powers off immediately
reboot	reboots the system immediately
ifconfig	shows network interfaces
ping [url]	simple send/receive of packets to [url]
lpr   lp	print a document to the default printer (or specify whatever printer you are connected to!)

## Misc commands

### Go

```
env GOOS=windows GOARCH=amd64 CGO_ENABLED=1 go build -v FILENAME.go # cross-compile for windows
go test -coverprofile cover.out <package_name> # save test coverage profile to cover.out
go tool cover -html=cover.out -o cover.html # convert cover.out to html
```

### Compiler instructions

```
g++ -std=c++17 -g main.cpp -o main
```

**ffmpeg - list all devices**

```
ffmpeg -f avfoundation -list_devices true -i ''
```

**ffmpeg - record from a device (change device number with -i flag in bash script)**

```
tmnlutils ffmpeg # not yet implemented  
sh ~/Documents/CheatSheets/Terminal_Applications/ffmpeg_record.sh  
# this is the actual script that gets called by tmnlutils  
ffplay <input_file>
```

**pandoc**

```
pandoc -s -o DOC.pdf DOC.md #compile a markdown file to pdf  
  
#download webpages for printing/offline reading  
wget <url> -o logfile #recursive download is possible, too  
pandoc DOC.html --pdf-engine=xelatex -o DOC.pdf #could not install the default engine on MacOS
```

**imagemagick**

```
convert <INPUT> -filter Lanczos -sampling-factor 1x1 -quality 90 -resize 150 <OUTPUT>  
#resizes a jpg to a lower resolution image with a decent result  
convert <INPUT> -crop 1200x300+0+250 <OUTPUT>  
#crop an image to size 1200x300 with cropping window starting at x=0, y=250
```

**Environment variables and how to get help**

```
env #list all environment variables (similarly, you can do that for go!) OR just:  
echo $VAR_NAME #e.g. $HOME, $GOPATH, ...  
  
man <command>  
<command> --help  
<command> -h
```