UNIX / LINUX CHEAT SHEET

FILE SYSTEM

`ls` — list items in current directory

`ls -l` — list items in current directory and show in long format to see perimissions, size, and modification date

`ls -a` — list all items in current directory, including hidden files

`ls -F` — list all items in current directory and show directories with a slash and executables with a star

`ls dir` — list all items in directory dir

`cd dir` — change directory to dir

`cd ..` — go up one directory

`cd /` — go to the root directory

`cd ~` — go to to your home directory

`cd -` — go to the last directory you were just in

`pwd` — show present working directory

`mkdir dir` — make directory dir

`rm file` — remove file

`rm -r dir` — remove directory dir recursively

`cp file1 file2` — copy file1 to file2

`cp -r dir1 dir2` — copy directory dir1 to dir2 recursively

`mv file1 file2` — move (rename) file1 to file2

`ln -s file link` — create symbolic link to file

`touch file` — create or update file

`cat file` — output the contents of file

`less file` — view file with page navigation

`head file` — output the first 10 lines of file

`tail file` — output the last 10 lines of file

`tail -f file` — output the contents of file as it grows, starting with the last 10 lines

`vim file` — edit file

`alias name 'command'` — create an alias for a command

SYSTEM

`shutdown` — shut down machine

`reboot` — restart machine

`date` — show the current date and time

`whoami` — who you are logged in as

`finger user` — display information about user

`man command` — show the manual for command

`df` — show disk usage

`du` — show directory space usage

`free` — show memory and swap usage

`whereis app` — show possible locations of app

`which app` — show which app will be run by default

SEARCHING

`grep pattern files` — search for pattern in files

`grep -r pattern dir` — search recursively for pattern in dir

`grep -rn pattern dir` — search recursively for pattern in dir and show the line number found

`grep -r pattern dir --include='*.ext` — search recursively for pattern in dir and only search in files with .ext extension

`command | grep pattern` — search for pattern in the output of command

`find file` — find all instances of file in real system

`locate file` — find all instances of file using indexed database built from the updatedb command. Much faster than find

`sed -i 's/day/night/g' file` — find all occurrences of day in a file and replace them with night - s means substitude and g means global - sed also supports regular expressions

PROCESS MANAGEMENT

`ps` — display your currently active processes

`top` — display all running processes

`kill pid` — kill process id pid

`kill -9 pid` — force kill process id pid

NETWORKING

`wget file` — download a file

`curl file` — download a file

`scp user@host:file dir` — secure copy a file from remote server to the dir directory on your machine

`scp file user@host:dir` — secure copy a file from your machine to the dir directory on a remote server

`scp -r user@host:dir dir` — secure copy the directory dir from remote server to the directory dir on your machine

`ssh user@host` — connect to host as user

`ssh -p port user@host` — connect to host on port as user

`ssh-copy-id user@host` — add your key to host for user to enable a keyed or passwordless login

`ping host` — ping host and output results

`whois domain` — get information for domain

`dig domain` — get DNS information for domain

`dig -x host` — reverse lookup host

`lsof -i tcp:1337` — list all processes running on port 1337

SHORTCUTS

`ctrl+a` — move cursor to beginning of line

`ctrl+f` — move cursor to end of line

`alt+f` — move cursor forward 1 word

`alt+b` — move cursor backward 1 word

PERMISSIONS

`ls -l` — list items in current directory and show permissions

`chmod ugo file` — change permissions of file to ugo - u is the user's permissions, g is the group's permissions, and o is everyone else's permissions. The values of u, g, and o can be any number between 0 and 7.

`7` — full permissions

`6` — read and write only

`5` — read and execute only

`4` — read only

`3` — write and execute only

`2` — write only

`1` — execute only

`0` — no permissions

`chmod 600 file` — you can read and write - good for files

`chmod 700 file` — you can read, write, and execute - good for scripts

`chmod 644 file` — you can read and write, and everyone else can only read - good for web pages

`chmod 755 file` — you can read, write, and execute, and everyone else can read and execute - good for programs that you want to share

COMPRESSION

`tar cf file.tar files` — create a tar named file.tar containing files

`tar xf file.tar` — extract the files from file.tar

`tar czf file.tar.gz files` — create a tar with Gzip compression

`tar xzf file.tar.gz` — extract a tar using Gzip

`gzip file` — compresses file and renames it to file.gz

`gzip -d file.gz` — decompresses file.gz back to file