

# CHEAT SHEET:



## Navigating

**pwd** Print working directory  
**cd** Change directory  
    ~ Home directory  
    - Previous working directory  
    ~*username* Home directory of *username*  
**ctrl-A** Move cursor to beginning of line  
**ctrl-E** Move cursor to end of line  
**ctrl-L** Clear the screen (same as *clear*)

## Manipulating

**cp** Copy files and directories  
    -a All attributes, ownerships, permissions  
    -i Prompt for confirmation (interactive)  
    -r Recursive  
    -u Only copy new/newer files (update)  
    -v Show informative messages (verbose)  
**mv** Move/rename files and directories  
    see **cp**: -i, -u, -v  
**mkdir** Create directories  
**touch** Create file (or modify accessed time)  
**rm** Remove files and directories  
    -f Ignore nonexisting files, don't prompt  
    see **cp**: -i, -r, -v  
**ln** Create hard and symbolic links  
    -s Symbolic link

## Exploring

**ls** List directory contents

    -a Include hidden content  
    -h Human readable format  
    -i Show inode number  
    -l Long format  
    -r Reverse order  
    -S Sort by file size  
    -t Sort by modification time  
**file** Determine a file's type  
**less** Show file  
**tree** Recursive directory listing  
    -L Level of depth  
    -d Directories only

## Wildcards

\* Any characters  
? Any single character  
[*chars*] Any character from *chars*  
[!*chars*] Any character not from *chars*  
[:*class*:] Any character from *class*

## Misc

**echo** Display a line of text  
**which** Show program to be executed  
**man** Show command manual page  
**apropos** List appropriate commands  
**info** Show information about command  
**whatis** Brief description of command  
**alias** Create alias for command  
**history** Show last 500 (default) commands  
    !*index* Reuse *index* command from history  
    ctrl-R Reverse incremental search

## Redirecting

**cat** Concatenate files  
**sort** Sort lines of text  
    -h Human numeric sort  
**uniq** Report or omit repeated lines  
    -d Show duplicates  
    -c Count occurrences  
**wc** Newline, word and byte counts for each file  
    -l Only count lines  
**grep** Print lines matching a pattern  
    -i Ignore case sensitivity  
    -n Number the lines  
    -c Count occurrences  
    -r Recursively search  
    -v Show non-matching lines  
**head** Output first part of a file  
**tail** Output last part of a file  
**tee** Write stdin to file *and* to stdout  
**xargs** Pipe args to command (e.g. from file)

## Operators

| Pipe stdout to stdin  
> Redirect (and overwrite) stdout  
>> Redirect (and append) stdout  
2> Redirect stderr (standard error)

## Expanding

\$(*command*) *Command* output as expansion  
\$((*expression*)) Arithmetic expression  
{*a,b,c*} Create multiple strings 'a' 'b' 'c'

{a..z} Create multiple strings 'a' to 'z'

## Permissions

**id** Display user identity

**chmod** Change a file's mode

**u+r** Add read to user

**g-w** Remove write from group

**o=x** Set execute for other (world)

**umask** Set the default file permissions

**002** Remove write from world (010)

**022** Remove write from group and world (010)

**chown** Change a file's owner (and group owner)

**user** Change owner to *user*

**:group** Change group owner to *group*

## Processes

**ps** Report a snapshot of current processes

**top** Show "top" processes (dynamically)

**jobs** List job launched from current terminal

***program* &** Launch *program* in background

**bg %*jobspec*** Move process to background

**fg %*jobspec*** Return process to foreground

**ctrl-Z** Stop current process (w/o terminate)

**kill *PID*** Signals *PID* to terminate

-1 Signals for hangup

-2 Signals for interruption (ctrl-C)

-9 Kills without cleanup

**killall *name*** Signal all *name*-processes

# WORK IN PROGRESS...