CHEAT SHEET: BASH

THE BOURNE-AGAIN SHELL

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 occurences
  `-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'

<div style="border: 1px solid; border-radius: 8px; display: inline-block; padding: 4px 40px;">Permissions</div>

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*

WORK IN PROGRESS...