Shell Reference

Basic Commands

- `cat` displays the contents of its inputs.
- `cd` path changes the current working directory.
- `cp` old new copies a file.
- `find` finds files with specific properties that match patterns.
- `grep` selects lines in files that match patterns.
- `head` displays the first few lines of its input.
- `ls` path prints a listing of a specific file or directory; `ls` on its own lists the current working directory.
- `man` command displays the manual page for a given command.
- `mkdir` path creates a new directory.
- `mv` old new moves (renames) a file or directory.
- `pwd` prints the user's current working directory.
- `rm` path removes (deletes) a file.
- `rmdir` path removes (deletes) an empty directory.
- `sort` sorts its inputs.
- `tail` displays the last few lines of its input.
- `touch` path creates an empty file if it doesn't already exist.
- `wc` counts lines, words, and characters in its inputs.
- `whoami` shows the user's current identity.

Paths

- `/path/from/root` is an absolute path.
- `/` on its own refers to the root of the filesystem.
- `/path/without/leading/slash` is a relative path.
- `.` refers to the current directory, `..` to its parent.
- `*` matches zero or more characters in a filename, so `*.txt` matches all files ending in `.txt`.
- `?` matches any single character in a filename, so `?.txt` matches a `.txt` but not any `.txt`.

Combining Commands

- `command > file` redirects a command's output to a file.
- `first | second` connects the output of the first command to the input of the second.
- `A for loop repeats commands once for every thing in a list:

```
for variable in name_1 name_2 name_3
done
```

- Use `$name` to expand a variable (i.e., get its value).
- `history` displays recent commands, and `number` to repeat a command by number.
- `bash filename` runs commands saved in `filename`.
- `$` refers to all of a shell script's command-line parameters.
- `$1, $2, etc., refer to specified command-line parameters.
- `$(command)` inserts a command's output in place.

`more` - display contents of file with page breaks (next page with Space key)

`cut` - cut out parts of file (`cut -f 2 -d : file.txt`)
`du` - report disk usage (`du -h`)
`df` - report file systems and their usage (`df -h`)
`chmod` - change permissions of a file (`chmod a+r file.txt`)
`ln` - create a link to a file (`ln -s ~/bin/prog.exe prog1.exe`)