Week 04 Homework 💻 🔬

Short one this week guys, because of the conference.

New stuff we learned this week:

- `~` is a shortcut for your *home directory*, as in `cd ~`
- `cd` by itself also sends you straight to your home dir
- tab completion - your shell will auto-complete files and directories
- **history**: cycle through commands using *the up arrow key*, or view all by typing `history`
- new command: `echo` - send text to standard out (not so useful on it's own, but great with *redirects)*
- `>` : redirect standard out to a file, creating it if it doesn't exist, and overwriting all contents if it exists
- `>>` : *append* std out to a file, creating it if it doesn't exist
- `|` : *pipe* the standard out of one program into the standard in of another 🛁
- **signals** — interrupt or end a program `<CTRL-D>` is more gentle, `<CTRL-C>` means kill 🔫

Homework plan:

- [ ] 2 days short CLI practice
- [ ] 1 day touch typing practice
- [ ] 1 day vimtutor

(no CCCS this week, to keep things shorter)

Homework day 1

- do a lesson of touch-typing practice. remember: deliberate, careful practice!
  https://www.how-to-type.com/
  http://touchtype.co/
- CLI practice #1 (see below)

Homework day 2

- `vimtutor` (Lesson 1.3, 1.4, 1.5, All of Lesson 2, All of Lesson 3, Lesson 4.2 and 4.4)

Homework day 3

- CLI Practice #2 (see below)

CLI Practice #1

1. `ssh` into your home dir
2. in *one command* make a set of nested directories: `jared/is/cool/and/smart`
3. jump all the way down in to the `smart/` dir one command
4. make a file called `goat.txt` that contains the word "goat" *WITHOUT* using `vim`
5. jump back up into your home dir by typing *only 4 characters* (including the space)
6. now, jump back down into `smart/` , but do it without typing the whole command again, instead us the `<UP ARROW>` key to cycle through your history and then press `<ENTER>` when you find the right command
7. now that you're back in `smart/` , make an *empty file* called `goat-names.txt`
8. now, at least 4 times, use the `echo` command to *append* your best names for goats into that file
9. type a command to barf out all of your goat names to standard out (if you appended correctly, you should see them all, one per line)
10. try typing `vim g` and then press `<TAB>` once. what happens? what happens if you press `<TAB>` twice?
11. now type `vim goat-` and press `<TAB>` and let the shell complete the filename. cool, right? then make sure to press `<ENTER>` after the filename is complete so that you start editing it in `vim`
12. now that you've got vim open, see if you can add one new name *at the top of the file*, and one new name *at the bottom of the file*, then save and close the file
13. **extra credit:** see if you remember how to use a *pipe* to search for one line of your `goat-names.txt` file. The command you want to pipe *into* is `grep`, like `grep <SEARCH>`

CLI Practice #2

1. `ssh` into your home dir
2. type in the command that will show you all the commands you have recently typed
3. whoa! the shell remembered the commands you typed last session. pretty cool, huh?
4. find the command that jumped you all the way down in to the `jared/is/cool/and/smart/` dir.
5. *repeat* that command by typing `!<NUMBER>` where the number is the one shown in your history next to that command
6. in the `smart/` dir, create a new file using `echo` and a *redirect* that contains the word "cheese" in a file called `grandpas-cheesebarn.txt`

7. now, edit the file you just created in `vim` but use *tab completion* to type the *minumum number of characters*
8. inside of vim now, write a short paragraph 10-40 words about something (maybe Grandpa's Cheesebarn?)
9. exit out of insert mode, and then without going back into insert mode, change all of the `a` characters into `o`
10. save and close the file from within `vim`
11. now, from the `smart/` dir, move the `grandpas-cheesebarn.txt` file up two directories, using a relative path
12. move all the way back up to your home dir, try to do by only typing *2 characters!*
13. from your home dir, delete all the stuff from last weeks lessons, leaving only the `jared/is/cool/and/smart` directories