Command line tips and tricks

Enjoy working on the command line!

NEH Institute "Advanced Digital Editing"
Week 1, day 5
July 15: 4pm - 5.30pm

Outcomes

- Work more easily on the CLI
- Understanding the bashrc file
- Create aliases to improve your workflow

Useful stuff

- Tap completion
- `$ ctrl + c`   abort the current process
- `$ ctrl + r`   run through the history of the commands (keep typing ctrl + r)
- `$ ctrl + a`   go to the beginning of the line
- `$ ctrl + e`   go to the end of the line
- `$ ctrl + u`   erase the whole line
- `$ ctrl + d`   exit the shell and close the CL window

Useful stuff

The Bashrc file

- A shell script that is invoked when you open your shell
- Located in the home directory and is normally hidden
  - `$ ~/.bashrc`
- You can use it for customizing and configuring your shell
  - Set system parameters
  - Set environment variables
  - Create aliases (shortcuts)
  - …

Useful stuff

How to set up your bashrc file:

- Navigate to your root directory (with `$ cd ~`)
- Double check if you don't already have a bashrc file:
  - List all files, including hidden files (`$ ls -a`)
- It should be there, if not: create it
  - `$ touch ~/.bashrc` (Mac)
  - `$ copy > ~/.bashrc` (Git bash)
  - Or alternatively `$ cat > ~/.bashrc` (Git bash)
- Open your bashrc in your text editor
  - `$ nano ~/.bashrc`
  - `$ open ~/.bashrc` (Mac)
  - `$ start ~/.bashrc` (Git bash on Windows)

Useful stuff

Aliases

- An alias is a substitute for a complete command (like a shortcut);
- Example of aliases:
    - Add flags to ls command
    - Add -i to rm command
    - Shortcut to open programs
    - … ?
- Aliases are added to your bashrc file

Useful stuff

Aliases pt.1

Let's create some aliases

- Open your bashrc file in your favorite text editor
- `alias ls="ls -lisa -GFh"`
- `alias oxy = "open -a 'Oxygen XML Editor'"`
- `alias profile = "open -a 'Sublime Text' ~/.bashrc"`
- …

Useful stuff

Aliases pt. 2

- Save your .bashrc file
- Source it on the CLI: `$ source ~/.bashrc`
- Try out the alias you just created!
- Repeat process:
  - Open .bashrc file
  - Create an alias
  - Save and source

Fun stuff

Shorten your command prompt:

- Add the line `PS1="[your-preferred-command-prompt]"` to your Bashrc file
- Save your Bashrc file
- Switch to your command line
- Type `$ source ~/.bashrc`
- You should now see your new command prompt!

Fun stuff

- Add color to your CLI (Mac only, git bash has it already)

  - Use the `-G` flag with the `ls` command

  - Set the CLICOLOR environment variable in your bash_profile: add `export CLICOLOR=1` to your bash_profile (followed by a save and a `source ~/.bash_profile` on the CLI)

  - Configure the colors with the LSCOLORS variable: `$ export LSCOLORS=[ExFxCxDxBxegedabagaced]`

  - Handy tool for color setting: https://geoff.greer.fm/lscolors/

Fun stuff

- Tree shows the directory's tree on the CLI
  - Install with `$ brew install tree` (Mac only!)
  - `$ tree`
  - `$ tree [folder]`
- Fortune: displays a fortune cookie saying when opening shell (Mac only)
  - Install fortune: `$ brew install fortune`
  - Add `fortune` to your bashrc
  - Save your bashrc
  - Source your bashrc on the command line: `$ source ~/.bashrc`
  - Close shell
  - Restart shell

References and further reading

- The Command Line Fundamentals [course](#) of David J. Birnbaum, Gabi Keane, and Emma Schwarz (make sure to go into the "command_line"-folder and check out the individual MarkDown files);
- [In-depth presentation](#) about Git, Github and repositories by Hugh Cayless;
- A concise overview of what a bashrc file is: https://www.w3schools.io/terminal/bash-bashrc-file/
- A bashrc customization guide: https://www.freecodecamp.org/news/bashrc-customization-guide/
- Find your question on [stackoverflow](#), an open platform for software development and related matters