# Lecture 14: Bash Shell & Command Line

LING 1340/2340: Data Science for Linguists

Na-Rae Han

# Objectives

▶ Finally, shell (bash, zsh)

- ◆ Running things in command line
- ◆ Interacting with text files in command line
- ◆ Regex-based text search using grep

▶ Follow up of Lecture 9: Data formats, text file encoding & conversion

- ◆ https://naraehan.github.io/Data-Science-for-Linguists-2023/lecture9.pdf

# Bash/Zsh shell

▶ What is a "shell"?

- https://en.wikipedia.org/wiki/Shell_(computing)
- Usually refers to the command-line interface (CLI) as opposed to graphical user interface (GUI).
- Bash is the most common flavor of shell in Unix-like OS.

> To find out which shell you're running:
>
> echo $SHELL

▶ Mac users

- Mac OS is a Unix-type OS.
- Terminal is a built-in terminal. Zsh is the default shell, very similar to bash.

▶ Windows users

- We installed "git bash": a bash environment for running command-line git.
- As a bonus, it came with pretty much all of popular Unix command-line tools!

# Shell introduction, navigating

▸ Introducing the shell

- https://swcarpentry.github.io/shell-novice/01-intro/

▸ Navigating & working with files and directories

- https://swcarpentry.github.io/shell-novice/02-filedir/
- https://swcarpentry.github.io/shell-novice/03-create/

▸ We've been doing some of these already, as part of our git routine. You should know:

- .    ..    ~
- pwd
- cd
- ls
- Command-line history with ⬆ and ⬇
- Using TAB for file name completion
- Using Control+C to quit

# Settling in, customizing

▶ You can customize your shell via editing:

`.bash_profile`

`.zprofile`

▶ In your home directory:

◆ *your_editor* `.bash_profile &`

◆ After adding entries or editing, you should either log back in, or execute `source .bash_profile`

> Without &, your terminal becomes unusable until you close your editor.

▶ Aliasing is the most common customization method:

`alias calc='/c/windows/system32/calc.exe'`

`alias ls='ls -hF --color=tty'`

← Your favorite shortcuts and command-line options

> Mac users: -G option for color. You may also have to customize Terminal.

# Wrapping up

▶ Progress report #2 due Friday!

▶ Next class

- ◆ More command line, grep, bash shell scripting
- ◆ Supercomputing at CRC