Lecture 10: Bash Shell, Command Line

LING 1340/2340: Data Science for Linguists

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Objectives

- Finally, Bash shell
- Running things in command line
- Interacting with text files in command line

Bash 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.
- Mac users
  - Mac OS is a Unix-type OS.
  - Terminal is a built-in shell, operates on 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!

Resources

- Learning resources section:
  - http://www.pitt.edu/~naraehan/ling1340/resources.html#bash
  - Software Carpentry, The Unix Shell:
    - http://swcarpentry.github.io/shell-novice/
  - Thirty Useful Unix Commands:
    - http://www.maths.manchester.ac.uk/~pjohnson/resources/unixShort/examples-commands.pdf
    - Ones you do not need:
      - compress, finger, lpr, talk
      - (Windows) "more" is not supported. Use "less" instead.

Shell introduction, navigating

- Introducing the shell
  - http://swcarpentry.github.io/shell-novice/01-intro/
- Navigating & working with files and directories
  - http://swcarpentry.github.io/shell-novice/02-filedir/
  - http://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

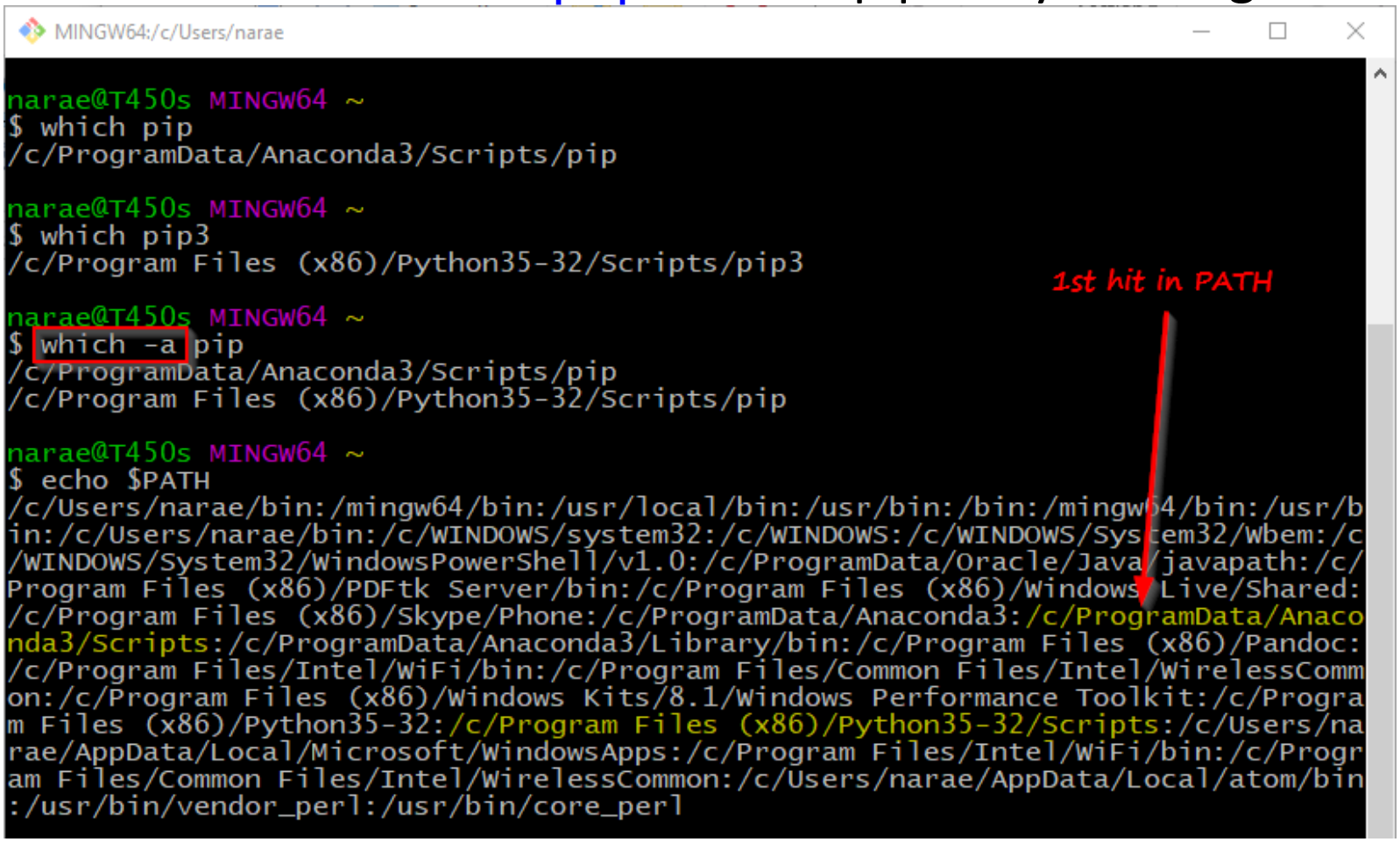
- You can customize your shell.
  - `.bashrc`
  - `.bash_profile`
  - ← These files store your customization.
- In your home directory:
  - *`your_editor`* `.bash_profile &`
  - After adding entries or editing, you should either log back in, or execute `source .bash_profile`.
- Aliasing is the most common customization method:

```
alias calc='/c/windows/system32/calc.exe'
alias ls='ls -hF --color=tty'
```

  - ← Your favorite shortcuts and command-line options

PATH, which, where

- We have been occasionally using `pip` to install Python libraries. Where is this `pip`? Which pip are you using?



Wrapping up

- Project 2st report due on Thursday.
  - 20 (data) - 10 (analysis) - 10 (presentation).
  - You should be done with data acquisition. Data processing + reorganization should also be mostly done.
  - Make an attempt at analysis.
  - Details posted on the Project Guidelines page.

- Practice Unix tools and bash shell!