Software Carpentry / Shell Novice Lecture Notes

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Overview:

Setup

Introducing the Shell

Navigating Files and Directories

Working With Files and Directories

Pipes and Filters

Loops

Shell Scripts

Finding Things

Setup:

- Download and install the data

- How to open a shell

    - Linux

    - Mac OS

    - Windows

Introducing the Shell:

- GUI vs CLI/TUI

- Nelle's Pipeline

Navigating Files and Directories:

- whoami

- pwd

- ls

- cd

Working With Files and Directories:

- mkdir

- nano

- touch

- rm

- mv

- cp

Pipes and Filters:

- wc
- echo
- redirection
- head
- tail
- cat
- less
- sort
- uniq
- wildcards

Loops:

- for/in/do/done

- naming files (spaces are evil)

- history ("Ctrl-r", "!!", "!$",)

- wildcards and dry runs ("*", "?", "[]")

- nested loops

Shell Scripts:

- 'bash filename' (forking and environments)

- arguments: $1 $2 etc. ("$@")

- comments

- extract a script from history

- file magic and permissions ("hash bang slash bin slash bash" (shebang))

Finding Things:

- grep

- find

- ”$()” or ”“”

- man command