Final Project

Due: June 9, 2023 at 11:59pm

For your final project, we want you to explore a tool or concept from the course (or a tool that we didn't discuss in the course but that you are interested in!) in further detail. Your role is to do a deep dive into this tool/concept, and summarize what you've learned in order to help others learn about how and when to use it. We want you to become an expert in one of these tools and teach the rest of us about it :)

You don't have to choose a totally new tool for this project—you could go deeper into one we already covered. For example, you may be interested in diving into the usage of `sed`. While we only covered using it for simple searching and replacing, it can do a lot more cool/useful things. In that case, you could explore `sed` in more depth and provide use cases beyond those discussed in class.

In terms of deliverables, we expect you to provide the following:

If you're researching a tool:

1. A written guide for how to use the tool, including tips, tricks and neat features
2. 3-4 slides describing the tool and giving examples of when it's useful

If you're researching a concept:

1. A writeup describing the concept to readers who are unfamiliar with it, and defining any important terms and/or acronyms
2. 3-4 slides explaining the concept at a high level, and providing key takeaways about it

Please submit both your written guide and your slides on Gradescope. There are two separate "Assignments" for the written guide and the slides. Both need to be submitted as PDFs.

Our goal is to create a compendium of tools that we can then share with everyone in the class.

Optionally, if you would like to present your topic to the class during our last meeting on Wednesday of Week 10, let us know and we'll reserve some time for you.

If you're struggling to think of ideas, here are some ideas of what you could cover:

- `sed`
- `awk`
- Perl
- Jupyter Notebooks
- Globbing
- `jq`
- Version control systems other than Git (e.g. Perforce, Mercurial)
- CI/CD tools

- `emacs`
- Web debugging
- VSCode extensions
- Alternative shells (e.g. Windows PowerShell)

If you want more suggestions, post on Ed and mention topics you're interested in learning more about—we can give you pointers for things to explore in those topics.