

CIS 191 Final Project Writeup

Members of your group

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Description of your project

We chose **Option 1: Build a tool you will find useful**. Our tool allows us to tag files across our entire file system. For example, consider the tag “study_guide.” Let’s say I added this tag to all of my study guide files from my four years at Penn, all in different folders. Our tool allows me to obtain a list of all the files with this tag (along with their exact location in my file system) or to create a new folder in a specified location that contains a copy of all these files.

We created this tool using a combination of Bash and Python scripting. We store the tag mappings locally and these tags are managed using a Python script. The filtering and copying of files is done using a Bash script.

Specific components and milestones to complete

We split the project up into two milestones.

Milestone 1: The Python Milestone we will handle first, figuring out the most efficient way to store the tags.

Milestone 2: The Bash Milestone will involve creating user commands for filtering and copying files. Users will only interact with the bash file. The bash file will call the python file to retrieve and modify information about the stored tags.

Contributions of both students

We both contributed to both milestones. We designed both of the milestones together, but allocated the work such that each of us was in charge of one of the milestones. Priya managed the python code and Caroline managed the bash code.

How to use your code (also included in a README)

To use our tool, call `./cl-tagging.sh` with the appropriate arguments. There are five types of commands: add, remove, view, list, and copy commands.

1. ADD commands

- `./cl-tagging.sh add <tagname> -f <filename>` adds a tag to the specified file.
- `./cl-tagging.sh add <tagname> -d <folder>` adds a tag to all the files in the specified folder.
- `./cl-tagging.sh add <tagname> -d <folder> -e <extension>` adds a tag to all the files with the specified extension in the specified folder.

2. REMOVE commands

- `./cl-tagging.sh remove <tagname> -f <filename>` removes a tag to the specified file.
- `./cl-tagging.sh remove <tagname> -d <folder>` removes a tag to all the files in the specified folder.
- `./cl-tagging.sh remove <tagname> -d <folder> -e <extension>` removes a tag to all the files with the specified extension in the specified folder.
- `./cl-tagging.sh remove <tagname>` removes the given tag from all the files its present on.

3. VIEW commands

- `./cl-tagging.sh view <filename>` prints all the tags (if any) for a given file.

4. LIST commands

- `./cl-tagging.sh list <tagname>` prints a list of all the files with this tag.

5. COPY commands

- `./cl-tagging.sh copy <tagname> <new_directory>` copies all the files with this tag to the given directory.

Link to github

<https://github.com/carokun/command-line-tagging.git>

Give some background on the tools or design of your project

While we did not see this tool prior to coming up with the idea, there is a [tool](#) that is very similar. Like TMSU, we do not modify the files when tagging and use a separate storage location to keep track of the tags.