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CS270: HW3

**Introduction**

The objective of this assignment was to write bash scripts to perform some generic actions. First, we had to write a script that allowed both the addition and the removal of line numbers from a text file. We weren’t allowed to use the newline (nl) or steam editor (sed) commands for this first script. I used the awk command to remove or append line numbers, and a passed in option to specify line number removal or addition.

For the second script, we were instructed to change all the file names in a specified directory. We had to change the file names by removing all the underscores in them, but only if they were C/C++ files. My script used a combination of regular expressions, the basename command, translate (tr), and array iteration. For the final bash script, we backed up files and directories into a special subdirectory called ‘.backup’. Our script also had to handle what happened when an existing file/directory in the backup directory has the same name as the one being currently backed up. I used multiple variations of the copy (cp) command, and prompted for user input whenever a naming conflict occurred.

Within each file’s header are four main sections: Goal, Project Description, Clarifications, and Possible Expansion. First, the goal, which outlines what has been mentioned here for the individual script. Next, the project description outlines the functionality of the script and some of its implementation. The clarifications contain any assumptions, warnings, or extra information not present in the project description. Possible Expansion describes possible additions to the script that would mitigate user error or improve functionality/flexibility. With more time, these possible expansion ideas would have been implemented.