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COMP 3500 Project 1 Report

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Introduction

The purpose of this project is to get students affiliated and experienced with Linux and Bash. To accomplish this, several bash commands are executed, a C program is compiled and debugged, and a Git repository is created and populated.

Linux Access

To complete this assignment, my personal laptop loaded with Ubuntu was used.

Tasks

To show familiarity with the terminal, the “script” command is used to record terminal the user’s terminal session. The file containing the session is called “commands.script”. Commands entered are as follows: man, cd, pwd, ls, mkdir, cp, mv, rm, rmdir, chmod, clear, top, who, nproc.

Piping information is a useful log keeping tool; to practice using the pipe command, cpuinfo, meminfo, lspci, and interrupt information are sent into individual text files.

Next, the GNU compiler collection, or gcc, is used to compile a C program that takes 10 numbers selected by me to be square rooted and collectively averaged. This file is called “simple.c”. Once the program is operating, compiling it with the “-g” option allows it to be processed by the gdb debugger. A .gdbinit file was created to be referenced on startup by gdb, however, it was refused for security purposes. Instead I manually entered the commands in gdb for the same effect. All of this was recorded in “compile.script”.

Git is an open source version control system that is used all over the world. I have used Git for several projects in which I collaborated with several people. To demonstrate Git, a script file called “git.script” was created. I already created a repository for this project before reading all the way through, but I redid some commits so that it could be recorded. A file called “LICENSE” was created and added for the first commit with the comment: “Initial Commit.” A file was cloned from online and the “status” command is used to show the differences between the current files and the last pulled system state. Again, another file called “CONTRIBUTIN.md” is added and “status” is used, then “diff”. All of these changes were committed and the “log” command was viewed. I also pushed these because I am using it for the rest of the class.

Conclusion

A significant amount of time was spent trying to get comfortable in the terminal. I have previous experience, but I always put off memorizing commands because I rarely did serious stuff. This project was great practice. There are some slight differences between my input and what the specification sheet says but I think that what I provide shows that I do understand the assignment.