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COMP3500
Project 1
Due: 1/22/21

Project1 Report

Step 1:

The First step of project 1 was to set up the linux environment. This was not too bad, however, getting the proper tools installed and finding out how to set them up was a bit of a challenge. I decided to go with the option of installing VirtualBox and a virtual version of centOS. After a bit of working with virtualbox to get thing setup the way I liked, the rest of step 1 was pretty easy. I then moved on to installing multiple Redhat files needed throughout the semester for our projects, which went really well. This was one of the easier steps as it was just setting up, however, it still took a while to get a handle on VirtualBox and centOS.

Step 2:

Step 2 was probably the easiest of the project. This step was all about getting used to using scripts to create a typescript that creates a copy of everything done on your terminal. This was rather useful, as it was and will be used as proof of following the steps for the rest of the project.

Step 3:

Step 3 is where things began to get trickier. The tasks first started off with creating a script to prove you are following the steps, then I moved into a series of multistep parts within step 3. It started off easy with using beginner commands within linux, and then showed the steps of piping information into a .txt file. This was not too terrible to do and was pretty self-explanatory. We then moved into more challenging things and started off by writing a simple.c program and learned how to compile using gcc. There were also small steps in here that were not too terrible such as using ldd to understand libraries which your program depends on. I then began working with the debugger, gdb, which took a while to get used to. This was perhaps the most difficult part of the project since it was such a brand new idea to me. I was struggling getting an error code that I did not have a specific debuginfo file downloaded, but when I tried to then download it, it would not work still. I then searched for answers a long time, until I came across the FAQ page posted on our class files. It was there that I found some other students before had this question and it had been answered, which finally helped me get through this part. I learned that when I launch GDB I could use a command to break, before

using the other commands to step through the simple.c file. This made it work and I was on to the last task of using git. While git went pretty well since it was mostly laid out for us, I did struggle on finding how to link my account with my name and email. After searching I found on the github help page, that there is a certain file you can edit (part of the gitconfig) that you can change to insert your name and email. This fixed my problem, and I finished this last task without much more difficulty.

Conclusion

This first project had a lot of small parts that were not too terrible to figure out, however, there was also a few that took a long time with a lot of searching to find the correct answer. I struggled mostly on finding out how to use gdb and what it meant, and also how to use git, and why it is important to know how to use git. However, after finding the answers I went through the rest of the project tasks very well. I have placed the files to used in my project in a tarball along with this pdf for easy viewing. Overall, I learned how effective gdb and git really are, and why they are essential tools for a software engineer to have.