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CSC 482

Command Line Basics

The Command Line is a powerful tool that makes the automation of tasks more efficient. In addition, it will be used in this course, so understanding the basics is important.

In this lab, we learned basic Linux command line skills including how to move between directories, how to modify files and their contents, how to search for files and directories using wildcard characters, and how to archive and unarchive folders. I was able to test these commands within the virtual Linux environment which allowed me a better understanding of their functionality.

Task 1: Learn Enough Command Line, Chapter 1

Exercise 1 (1.7.1): Write a command to print the string Use "man echo", *including* the quotes; i.e., take care not to print out Use man echo instead. *Hint*: Use double quotes in the inner string, and wrap the whole thing in single quotes.

Answer 1: `echo 'Use "man echo"'`

Task 2: Learn Enough Command Line, Chapter 2

Exercise 2 (2.4.1): Type the sequence of commands needed to create an empty file called `foo`, rename it to `bar`, and copy it to `baz`.

Answer to #2:
```
touch foo
mv foo bar
cp bar baz
```

Exercise 3 (2.4.1): What is the command to list only the files starting with the letter "b"? *Hint*: Use a wildcard.

Answer to #3:   `ls b*`

Exercise 4 (2.4.1): Remove both bar and baz using a *single* call to rm. *Hint*: If those are the only two files in the current directory that start with the letter "b", you can use the wildcard pattern from the previous exercise.

Answer to #4:   `rm bar baz`   or   `rm b*`

Task 3: Archiving Files

In this task, we are given an overview of the archive formats `tar` and `zip.` In the first part of the task, we run into an issue while compressing the temporary directory where the two files in that directory are not included in the compressed zip file. To fix this, an option must be added to the zip command. After looking through the documentation, it was determined that the –r option (recursively travel through all directories) needed to be used because now all files included in the temporary directory will be included with the zip file. The command used for this was   `zip –r temp.zip temp`

Later in this task, it asks us to use the curl command to download a lab file from a given URL. Once the file had been downloaded, we discovered it was a zip file which needed to be unpacked. The command I used to do this was   `unzip ~/csc482-lab0-file.zip`

Task 4: Finding the Secret Word

The last task of this lab had us searching through an unpacked zip file searching for a secret word contained within the extracted files. This task involved using many of the commands learned in Task 3, seeing that the main zip file contained other archives that needed to be unpacked. In order to find the word, I first did a search of the top directory that included all its subdirectories and files included in them. After viewing this information, I pinpointed subdirectory 'tx5' as having a few interesting files with in it. Upon navigating to this subdirectory, I noticed it had 3 .xz files in it. I used the xz command with the –d decompression option, then I was able to view the files using less. These files contained too much data to look through myself, so I entered a grep command that searched the files for the string beginning with "The secret is" as was stated in the lab and found that the secret word was contained within the bwords file. The secret word that was found along with the commands used to find it are listed below:

The secret word is **xyzzy**

```
273  man dir
274  dir -R
275  cd c/z/t9/tx5
276  ls
277  xz -d bwords.xz
278  ls
279  xz -d cracklib-small.xz
280  xz -d words.xz
281  ls
282  ls bwords
283  ls -l
284  ls -l bwords
285  cd bwords
286  ls
```

```
287  less bwords
288  less cracklib-small
289  less words
290  grep "The secret is" bwords
```