CS246E—Assignment 0

B. Lushman

Due: Tuesday, September 14, 2021, 5pm

This assignment is designed to get you familiar with the most basic aspects of working with Linux, and with assignment submission. **It is not worth any marks, but you must get 100% on this assignment to get credit for the other assignments.**

1. Log into your `linux.student.cs` account and execute the command `ls`. You should see a directory entitled `cs246e`. If you do not see this directory, create it via the command `mkdir cs246e`.

2. Navigate to your `cs246e` directory: `cd cs246e`.

3. Verify that you are in your `cs246e` directory: `pwd`.

4. Check out the course Git repository:

   ```
   git clone ssh://linux.student.cs.uwaterloo.ca/u/cs246e/pubrepo/1219/.git
   ```

5. Verify that the checkout succeeded: `ls`. You should see a directory called `1219`.
   (Parenthetical note: 1219 is Quest-speak for Fall 2021. The last digit is the month, and the first three digits, added to 1900, give the year.)

6. Navigate to the repository's assignment 0 directory: `cd 1219/a0`.

7. Once again, verify that you are in the correct directory: `pwd`.

8. Using a text editor (either vi or emacs), create the file `hello.txt`, with contents exactly as shown below:

   ```
   Hello from Linux!
   I used vi.
   ```

   If you used Emacs, replace `vi` above with `emacs`. You should press enter at the end of the first line, and at the end of the second line. Once you have created the file, use the `wc` command to determine how many lines the file contains. Take note of the relationship between the number of times you pressed Enter, and the number of lines contained in the file. The exact result will depend on your editor.

9. Using a text editor (either vi or emacs), open the file `~/.bash_profile` (`vi ~/.bash_profile` or `emacs ~/.bash_profile`). This file should not be empty; if it is, check that you have typed the name of the file correctly. Add the following lines to the *end* of this file:

   ```
   source ~cs246e/setup
   alias g++14="g++ -std=c++14 -Wall -g"
   ```

   (Optional) We recommend also adding the following lines to the end of this file:

```
alias vi="vi -X"
export EDITOR=vi
```

If you choose to use vi, these lines will make vi launch faster, and will ensure that other tools (like git) default to vi when they launch a text editor. If you choose to use emacs, omit the first line, and replace `vi` with `emacs` in the second line. Save your changes and exit (in vi, hit Escape and type `:wq`, followed by Enter; in emacs, Ctrl-X, Ctrl-S, Ctrl-X, Ctrl-C).

10. Using a text editor (either vi or emacs), create the text file `path1.txt` that contains the answer to the following question: if your current directory is `/u/jdoe/cs246e/1219`, what relative path is equivalent to the absolute path `/u/jdoe/cs246e/1219/lectures/c++/overload`? Make sure, as always, that your file ends with a newline character (whether this implies that you must press Enter will depend on your editor). Use `wc` to verify for yourself that your file consists of exactly one line.

11. Using a text editor (either vi or emacs), create the text file `path2.txt` that contains the answer to the following question: if your current directory is `/u/jdoe/cs246e/1219`, what relative path is equivalent to the absolute path `/u/jdoe/cs245/a1`? Make sure, as always, that your file ends with a newline character. Use `wc` to verify for yourself that your file consists of exactly one line.

12. Read the manual page for the `wc` command: `man wc`.

13. Use `wc` to count the number of *words* in your file `hello.txt`, and use output redirection to store the result in the file `hellowords.txt`.

14. Create a text file called `promise.txt` that contains the following text, all on one line:

    ```
    I promise not to publicly ask for or provide hints about Marmoset test cases
    or assignment solutions on Piazza.
    ```

15. Make a zip file containing all of the files in your a0 directory: `zip a0.zip *` — make sure you are in your `cs246e/1219/a0` directory when you do this.

16. Read this document about submitting assignments to Marmoset:

    `http://www.student.cs.uwaterloo.ca/~cs246/current/marm_sub/index.html`

17. Submit the file `a0.zip` to Marmoset.