

# Assignment #0

**Due Date:** Monday, 13 May, 2019, 5:00 pm

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. Read the course outline at

`https://www.student.cs.uwaterloo.ca/~cs246/current/S19\_CS246\_Outline.html`

2. Log into your `linux.student.cs` account and execute the command `ls`. You should see a directory entitled `cs246`. If you do not see this directory, create it via the command `mkdir cs246`.

3. Navigate to your `cs246` directory: `cd cs246`.

4. Verify that you are in your `cs246` directory: `pwd`.

5. Check out the course GIT repository:

```
git clone ssh://linux.student.cs.uwaterloo.ca/u/cs246/pubrepo/1195/.git
```

6. Verify that the checkout succeeded: `ls`. You should see a directory called `1195`. (Parenthetical note: 1195 is Quest-speak for Spring 2019. The last digit is the month, and the first three digits, added to 1900, give the year.)

7. Navigate to the repository's assignment 0 directory: `cd 1195/a0`.

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

9. 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.

10. Navigate to your home directory: `cd` (or `cd ~`).

11. List the hidden files in your home directory: `ls -d .*`.

12. Determine whether your home directory contains a file called `.bash_profile` — if it doesn't, `cp .profile .bash_profile`; if it does, move on to the next step.

13. 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 ~cs246/setup  
source ~cs246/setup2  
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`).

14. Navigate to your `a0` directory: `cd cs246/1195/a0`.
15. 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/cs246/1195`, what *relative path* is equivalent to the *absolute path* `/u/jdoe/cs246/1195/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.
16. 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/cs246/1195`, 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.
17. Read the manual page for the `wc` command: `man wc`.
18. Use `wc` to count the number of *words* in your file `hello.txt`, and use output redirection to store the result in the file `helloworlds.txt`.
19. 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.
```
20. Make a zip file containing all of the files in your `a0` directory: `zip a0.zip *` — **make sure you are in your `cs246/1195/a0` directory when you do this**, otherwise your file will contain your entire `a0` directory structure, and not just the files contained in `a0`. (Having the directory structure will cause you to fail the Marmoset tests.)
21. Read these documents about submitting assignments to Marmoset:

```
http://www.student.cs.uwaterloo.ca/~cs241/w3m
http://www.student.cs.uwaterloo.ca/~cs246/current/marm_sub/index.html
```

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