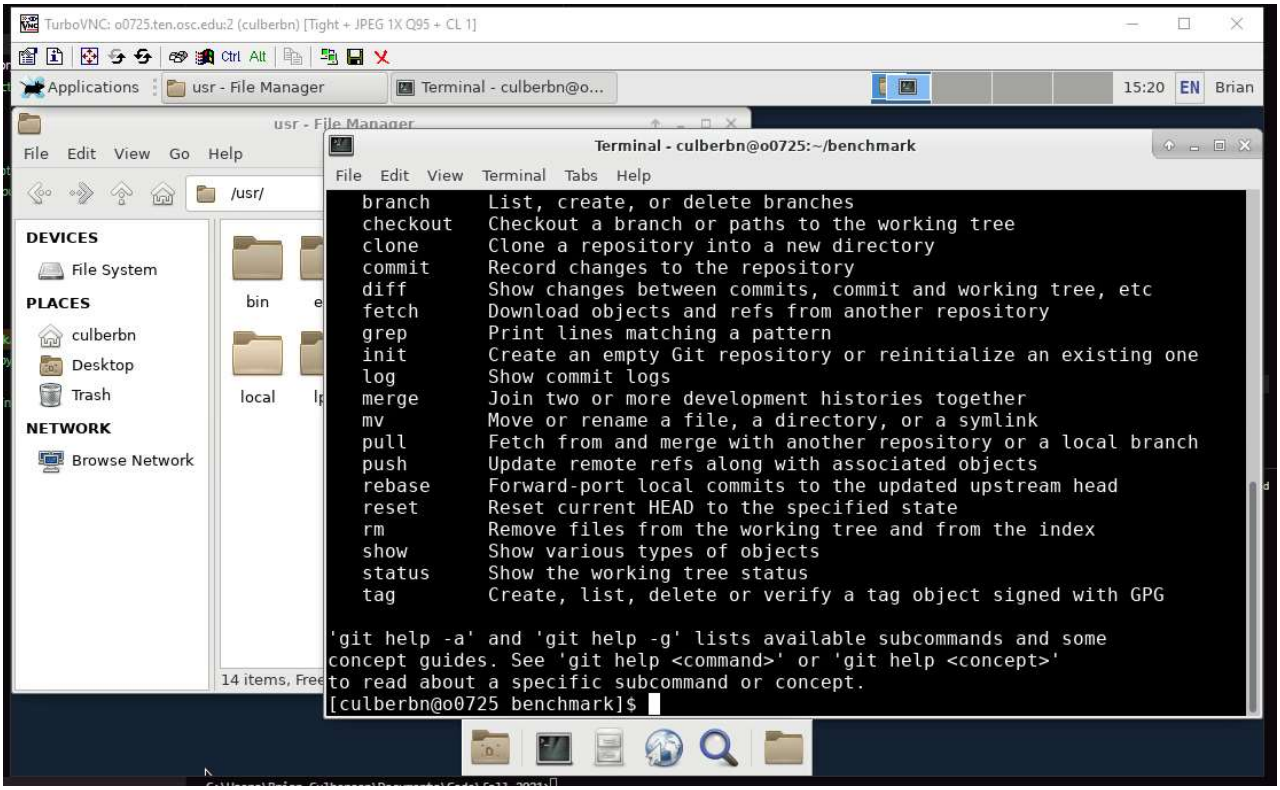
Assignment 1 Writeup

Wednesday, September 8, 2021 3:08 PM

My Setup is a modified custom program that I wrote earlier in the semester that takes floating point operations and multiplies, divide, adds, and subtracts a set of floating point numbers

This was first tested as a normal program and then adapted into a multi-process application and a multi-threading running all 4 different applications in separate processes. This is then timed to see how long it takes to run and then outputs 10 different runs in a csv format.



Page for the OSC session

I ran 3 tests, module 1 is running each of the 4 benchmarking programs one at a time. module is running each of the tests in its own individual process. Module 2 is running the same benchmarking program but it runs the 4 programs at the same time once with multiprocessing and once with multithreading. I did have to create a new session for this operation

Unfortunately the multiprocessing module and the multithreading that I wrote was slower than the concurrent version. I think this is due to the amount of memory that has to be copied over for each process. This could also be due to the fact that this changes on different machines. On my laptop it looks like they run 1 at a time. The threading can be explained that python limits running threads and runs them more concurrently. Multiprocessing for python is better for CPU intensive work but this didn't show in the data I collected.