Homework 2 - Unix Shell

CS 372: Operating Systems   Fall 2022
Instructor: Ashwin Lall   Due: 2022-09-21

Overview

For this project, you will build a simplified Unix shell. This will allow you to understand how a shell is built and how processes are created, managed, and destroyed.

You should work with a partner on this project. You and your partner should create a git repository in which you share your code with each other (but no one else). If you have not used git (or other version control) before, it is well worth learning.

Details

If you have not already done so, start by checking out the textbook project code:

    git clone https://github.com/remzi-arpacidusseau/ostep-projects/

You will be working on the `processes-shell` project. The directory has a README with instructions, which you can also find here:

    https://github.com/remzi-arpacidusseau/ostep-projects/tree/master/processes-shell

Follow the instructions for creating the shell. The only difference should be that your shell should be called `dush` (for DU shell). Read through the specifications carefully first before you start to implement this. It will take time to get everything working, so **do not leave this until the last few days**. If you do not complete the more advanced features (e.g., redirection or parallel commands), please make a note of this in a README file with your submission—you will still get partial credit for what you get working.

Testing

The `processes-shell` folder has a tester called `test-wish.sh`. Make the necessary changes to convert this to `test-dush.sh`. As you write your code, try to pass as many tests as you can. I will be testing your code on these test cases (and perhaps more).

Documentation and Style

Make sure that all your functions have documentation and there is a good amount of comments in the code as well. You should also make good style choices and follow a consistent style throughout. Part of your grade will come from your style.

Submit

Please submit the following files:

1. `Makefile`

2. `dush.c`