

Operating Systems (coe628)

Lab 4

Due the Week of February 12, 2024

Objectives

- Learn how to use dup2 (and/or dup) and pipe
- Write a simple shell to support piping

Getting started

1. Create a C Project called lab4.
2. Your *main* function should read a single line from *stdin* that is guaranteed to consist of words separated by a single space and with a pipe symbol (vertical bar '|') somewhere before the end.
3. Use fork such that the parent executes the command described by what comes before the pipe symbol and redirects its stdout to the pipe input. The child process should execute the command following the pipe symbol and redirect the its stdin from the pipe output.
4. For example, if the line was:

ls | wc -w

The "ls" command output would be piped into the "wc" command ("word count") with option "-w" (count only words not characters and lines). The result would be the number of files in the current directory.

Submit your lab

You must submit the project on a departmental computer; thus, you need to do the following:

Submit the zip file with the command: submit coe628 lab4 lab4.zip