IS F462 Network Programming
Assignment 1

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P1. You are required to build a bash-like shell for the following requirements. Your program should not use temporary files, popen(), system() library calls. It should only use system-call wrappers from the library. It should not use sh or bash shells to execute a command.

// Pipelining process

1. Take input from the user.
2. Parse the input, first tokenize on the basis of the pipe '|' operator to obtain the individual commands in the pipeline.
3. Then tokenize on the basis of space ' ' to obtain the parameters for each individual command. Store all the commands in an array of arrays.
4. Create a forking and redirection routine which forks children to execute the commands and redirects the ends of the pipe to stdin/stdout. This will be used throughout the pipeline except at the end.
5. The last command in the pipeline will be executed by the parent. All commands are executed using execvp() which checks for PATH.

// Signal Handling

1. Block SIGINT and SIGQUIT signals using sigprocmask() and write handlers for them.

// Deliverables

I wasn't able to implement the new operators for the shell. Other requirements seem to be working correctly.