

## Parsing

The parser goes char by char checking the line that it received from the user. It checks for whitespace, quotes, and quotation marks. When it detects a quote or quotation mark, it triggers a boolean that makes sure to keep whitespace in the string.

>

Take the right command as the output file. With that argument, `open()` is called with the correct permissions and `fd[1]` is redirected to the file.

<

Take the right command as the input file. With that argument, `open()` is called with the correct permissions and `fd[0]` is redirected to receive input from the file.

&

Fork and execute the command. In the parent, the pid of the child is pushed back into a vector. Then, the parent does not wait on the child to finish. Then, when running commands later, the vector is checked to see if the PIDs in the vector have finished. If they are done, the PID is reaped.

Cd

The second argument is taken as the place to change directory to. Then, the `chdir` system call is used to change directory.

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By parsing for pipes and storing them in a vector with their indices, it is easy to split each command up by pipes. Then, each command is forked and executed with the pipes setup to write and read respectfully for each pipe.