

For project 4, I implemented the 'source' command, which is used to execute shell commands within another file. I approached this by having the child process execute the read commands from the sourced file and outputting the results of the child process in the parent process. Specifically, I used the `popen()` function. The hardest part was testing the program. I created a testing script file to see if it works. However, I did not notice that I was trying to compile a script file with a cpp compiler as if it were a cpp program, leading to compilation errors. Thus, I had to figure out how to compile the script file separately from the main program. I finally found a way to use bash, which is a shell interpreter, to execute the script file separately from the compilation of the cpp program.