

Through this project I learned a lot about string processing in C, pointers, and process execution. I also figured out how to implement a simple linked-list in C, as well as how to redirect output from a process's stdio using file descriptors. Along with these major topics, I was able to get a bit more experience using C in general.

I implemented a linked-list in my program in order to dynamically keep track of the names of the commands that were running in the background. I felt that this was more efficient than using an array because I don't know how many processes will be running in the background at a time. So by using a linked-list, it can run as many as the system will allow. In order to redirect output for the built-in commands, I simply opened a FILE with the name that the user passed and wrote to it using the fprintf function. For the non-built in commands, I used the dup2 function to redirect the output from stdio of the child process to the file with the name given in the user's command.