

Lab 2 Report
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Purpose

The purpose of this lab is to become familiar with how processes are created, handled, and closed

Execution

Creating new Processes

In this section I reviewed what the creation and waiting of a process. This was review from lecture this week. In the examples given, it is clear how to create a child process and handle that process differently by checking the pid_t.

Exec functions

Again, this section was review from lecture over the exec functions. During the examples and the programming assignment for this lab, I learned what variables should be passed as the argArray and the envArray, which was unclear before doing coding examples.

Anyopen.c

I used the examples provided as a skeleton for my code. I was limited by my knowledge of the c language, so my code may not be the most efficient as possible.

The strategy I used was have two char arrays hard coded with the extensions and corresponding executables in the same index. This allowed me to use a for loop to open the input file with the correct executable. I also use a helper method which returns 1 or 0 if the file ends with a certain extension to keep my code clean.

I did all of my comparing in the child==0 branch of my if statement, following the form of the examples in part 4. Doing this allows a main function to continue running in the background. This would be very useful in a larger program or if I were to implement opening multiple files. I do a few input validation checking prior to the execlp calls to check if the file type is supported and that the user has imputed a file.

I ran into a few complications figuring out the input of the execlp function, but was able to figure it out using the exec 2 man terminal call. I also had issues with garbage returns to the terminal from my program when given bad output. I solved this by adding more robust validation at the beginning and during the program. One error that I could not figure out was when anyopen would open a file, the file would open correctly, but the executable would seem to crash upon closing of the window.

Conclusion

This lab was successful in getting a foundation of understanding in creating, identifying, and terminating processes. I was able to get my code working according to the specifications listed in the lab instructions.