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CECS 326 Sec 02

Professor Xu

Project 1 "Warm up of Interprocess Communication" Report

When doing this Project I decided to do it in Python, this required me to find a way in which libraries to use for pipes and for the terminal commands. That is when I found out about the os and sys library. We use the os library the most during the code as it is required for the pipe, the child, and parent process; as well as using it to see if our "source.txt" file exists before continuing the code. We then use the sys library primary to give us more control from a terminal level as it allows us to set certain arguments used in the terminal as our variables that will be used as the "original file" and the "copy file"; we also use this library to force program exits based on certain errors.

I formatted my code to check first if there are enough arguments used in the terminal and if there are not then we force exit the program, if there is then we assign the 2nd and 3rd argument to their own variables which will be used during our child and parent process. Although, if the 1st file does not exist then we also force exit the program and provide an Error message as to what the issue is. I then created the file descriptors for reading and writing using the os.pipe() function, and then created the child process by using "child_pid = os.fork()" which handled the error for if the fork is unsuccessful (this occurs if "child_pid" is less than 0). If the fork is successful we go right into the parent process code if "child_pid" is greater than 0, then if "child_pid" is equal to 0 we start the child process. I also made sure to set our Buffer size to 25 as a global variable.

YouTube Link: https://youtu.be/DPO1_gM7uhs?si=FQm90y6Y6bxOTNdH