Lab 3 Instruction

In this project, you will learn how to design a file-copying program using ordinary pipes in C. This program named filecopy will be passed two parameters: the name of the file to be copied and the name of the copied file. The program will then create an ordinary pipe and write the contents of the file to be copied to the pipe. The child process will read this file from the pipe and write it to the destination file. For example, if we invoke the program as follows:

   filecopy input.txt copy.txt

the file input.txt will be written to the pipe. The child process will read the contents of this file and write it to the destination file copy.txt. You may write this program using either UNIX or Windows pipes. This page includes more info about Linux pipe.

   http://man7.org/linux/man-pages/man2/pipe.2.html

Step1: Create pipe file descriptor

Step2: Set up the pipe, open both input and output files. Make sure your program closes file handles. (5 pts)

Step3: Create the processes. Read from the input file in parent process and write to the pipe. Write to the output file in the child process. Make sure your program closes file handles. (5 pts)

Step4: Add a timestamp in the child process to record the time when the reading-writing is done. Print the timestamp to console output. (5 pts)

Step5: Substitute the name of your source code with K200LoginName.c, compile and execute the program (change the file name in your makefile if you decide to use make).

Step6: Take a screenshot of your terminal which shows the whole compile-and-execution process and paste the screenshot in a PDF file. (5 pts)

Step7: Provide a screenshot of your programming tracking report. (5 pts)

Submission Instruction:

Upload .c file and the PDF file.
The .c file should be named as K200LoginName.c.
The PDF file comprising your screenshots needs to be named following this format, K200LoginName_YourLastName.pdf
Both files need to be submitted here in Moodle.

Submission failed to meet the submission requirement will not be graded. Grade may be forfeited.