Important: Please do all assignments on hoare

Unix System Calls and Library Functions

The goal of this homework is to become familiar with the environment in hoare while practising system calls. I’ll like to see the use of perror and getopt in this submission. Do Exercise 3.8 (p. 87) in your text by Robbins/Robbins.

The exercise expands on the process chain of Program 3.1 in the book. So, you will need to study that code well. The process chain is a vehicle to experiment with wait(2) and with sharing of devices. All of the processes in the chain created by Program 3.1 share stdin, stdout, and stderr.

I’ll like some meaningful error messages. The format for error messages should be:

my_prog: Error: Detailed error message

where my_prog is actually the name of the executable (argv[0]) that you are trying to execute.

What to handin

Create your programs in a directory called username.1 where username is your username on hoare. Once you are done with development and debugging, remove the executables and object files, and issue the following commands:

% cd
% ~sanjiv/bin/handin cs4760 1

Include the answers or comments to all the questions (1-8) in a file called Answers (make sure the case is correct).

Do not forget Makefile (with suffix or pattern rules), RCS, and README for the assignment. If you do not use RCS, you will lose 10 points. I want to see the log of how the program files are modified. Therefore, you should use keyword substitution within RCS inside your source files. I’ll like to see at least the use of Author, Date, and Log keywords. You must check in the files at least once a day while you are working on them. Omission of a Makefile (with suffix rules) will result in a loss of another 10 points, while README will cost you 5 points. I do not like to see any extensions on Makefile and README files. Before the final submission, perform a make clean and keep the latest source checked out in your directory.

You do not have to hand in a hard copy of the project. Assignment is due by 11:59pm on the due date.