Linux Assignment - 4

1. Create a program that will take a command line parameter – a directory name. The program will create 2 children. The first child will execute the “ls” command on the directory, recursively. The o/p of the first child must be redirected to an unnamed pipe(that must be created before the children are created). The second child must read the i/p from the unnamed pipe. The second child also must execute “less” command on the data read. The parent must wait for both the children are terminated,clean-up using waitpid() and print the message whether the above job was completed successfully – if there was a failure, parent must print the error message and which process in that job failed.

linux Assignment – 4...continued

2. Look into client-server sample code that was discussed in the class – meaning, sys_p_server_fifo.c. Use the sample code to write a server that will handle multiple clients concurrently using a new process for each client's new request – also, write several clients that will communicate with the server process as discussed in the class using diagrams. In this assignment, there will be one named fifo used by all clients for sending request messages to the server. This is known as server's named fifo. In addition, there will be one named fifo for each client for receiving its requested data. Request message named fifo will be created by the server. Each client will create their own named fifo for receiving their requested data.

3. Repeat the above client-server assignment using a message queue in the place of server's named fifo. Each client will continue to use a named fifo for receiving their data from the server.

4. Create a regular file and write as much data as possible into the file. Next, Read all the data from the file and print on to terminal using write system call API.
