Lab 1 – myshell

The first lab assignment is to write your own shell in C (or C++). The program you will write has these requirements.

- It will be started with the command myshell [prompt]. If the optional prompt is not specified, the prompt will be ”myshell: ".
- It will read in the line of commands that will consist of executables, arguments and the tokens “**<**”, “**>**”, “**>>**”, “**&**”, “**;**” and “**|**”
- You will then create all of the necessary processes with the proper redirection of input and output.
- The shell should exit when the user types CTRL-D or exit
- Implement “cd” as a shell builtin

System Calls

fork() - creates an exact copy of the currently running process, and is used by the shell to spawn a new process.
execvp() - call is used to overwrite the currently running program with a new program
dup2() allows you redirect a file descriptor to point to another file descriptor
pipe() creates a pair of file descriptors for interprocess communication

You may also need to handle the *sigchld* signal.

You should check the return value from these calls and report problems with **perror().**