Hw04: Implementing a shell

Focus:

- Process Control, I/O redirection, signals

Task:

Write a shell. It should accept commands, including arguments and execute them. In addition, it should handle:

- I/O redirection.
  - You may assume the symbols >, <, etc., are surrounded by whitespace.
  - Provide the usual redirection of standard input, output, and error, along with appending of standard output.
  - I/O redirection may occur anywhere in the command, not just at the end. Experiment with the bash shell if you are not sure what reasonably can and cannot be done.
- Environment
  - Use whatever prompt string you like by default, however note that it should end in a space otherwise it won't look very good on the screen.
  - If the PS1 environment variable was set when your shell started up, then use that string instead. Don't worry about any significance of "special" characters in the prompt string, such as \d or \h.
- Built-in Commands
  - cd and exit, It would be a sad shell that would not allow changing the directory (chdir) or exiting the shell (exit).
- Command parsing
  - Use strtok to tokenize the command line.
- Signals
  - What happens to a shell if you send it SIGINT or SiGQUIT? What happens to a process that shell runs when those signals are sent? Your shell should behave similarly. (No I am not concerned with the exact output that might be displayed.)

Not included

Do not attempt at this point:

- Piping
- Background processing
- Globbing
- Quotes

Turn in:

- A makefile.
- source file(s) for your solution.
- Optional README if there is *anything* I need to know about your program, e.g. it doesn't work.