Linux Shell

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Patterns

- Interpreter Pattern- Used in order to parse the user's commands.
- Command Pattern- Used to encapsulate command request as an object.
- Singleton-Used to hold any global variables that may be present in our shell.
- Builder- Takes interpreted command and builds object from it.
- Reactor Pattern- waits for user input.

Classes

- Process Data Structure that will hold any processes to be run.
- Main class- continues to loop and waits for user input to fork and exec a command.
- Interpreter Class-Takes in and parses a string, passes values on to a Builder Class
- Builder Class- Takes parsed command and puts it into a process object
- Command Class- Takes command object and execs it

Libraries/APIs

- Boost.Spirit will be used as a parser
- STL

- That's about it…

Supported Commands

- Change Directory
- List Directory Contents
- Kill
- Anything that can be exec'ed
- Remove
- Copy/Paste
- Run commands in foreground or background
- No Sudo level commands

Output Redirection

- We will provide support for output redirection in the form of piping.

- We will also allow support for outputting to files, and reading in from files.