Synopsis

Operating System and System Programming

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This project focuses on the idea behind the linux terminal command prompt and how it works in Ubuntu and Fedora.

Let's look at a shell from the top down. A shell does three main things in its lifetime.

- **Initialize**: In this step, a typical shell would read and execute its configuration files. These change aspects of the shell's behavior.
- **Interpret**: Next, the shell reads commands from stdin (which could be interactive, or a file) and executes them.
- **Terminate**: After its commands are executed, the shell executes any shutdown commands, frees up any memory, and terminates.

After a command is entered, the following things are done:

1. Command is entered and if length is non-null, keep it in history.
2. Parsing : Parsing is the breaking up of commands into individual words and strings
3. Checking for special characters like pipes, etc is done
4. Checking if built-in commands are asked for.

These steps are so general that they could apply to many programs, but we're going to use them for the basis for our shell. Our shell will be simple that there won't be any configuration files, and there won't be any shutdown command. So, we'll just call the looping function and then terminate. But in terms of architecture, it's important to keep in mind that the lifetime of the program is more than just looping.

Git Integration

1. The git features will be integrated like clone, push, revert etc.
2. Check for any syntax error in any command.
3. Provides output on successful run similar to that of unix terminals.
4. Special feature of one command push
5. Special feature of one command pull.