Abraham Schultz
CIS 3207

Welcome to the world of CREAM SHELL!

(Use at your own risk..)

This is my version of a Unix style command line interpreter.

It supports all the standard features one has come to expect from a Linux shell.
You can open and close, erase and move files around if you want. Run executables and redirect the output if you so desire! It even has colors!

Below are the instructions for use, which is also the output from the help command (a built-in command!).

```
cd -[directory name to move to]
dir              // prints out files in current directory
echo -[args]     // prints to screen whatever is given as input
envr             //prints environment variables
pause            // pauses until user hits enter
clr              // clear terminal
help             // displays help
exit             // exits
```

Plus, all the standard Unix commands, you can think off!

Program Design

The program has Only two major data structures. One, an array of length 1000 for the first list of commands and it arguments provided by the user, and another array of equal length for the second command and its associated arguments.

There is a function which takes the user input and parses it into separate strings.

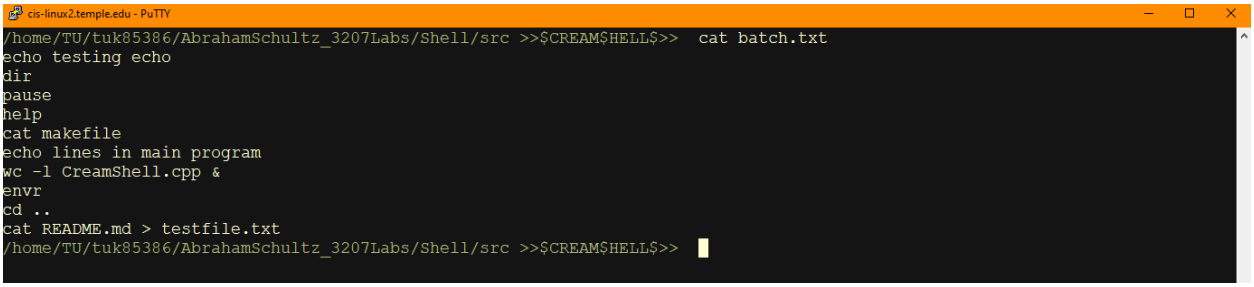
We check for special characters like the | or > symbol then we use one of four event handlers.

One for internal commands, one, for external commands, one for redirecting commands, and one for piping commands.

Program Testing

To test the program the user can utilize the program itself. What I mean is we can run Linux commands like ‘ls’ or ‘env’ in the shell and compare the output to our equivalent built in commands. Moreover, we can also provide a batch file with multiple commands to test many components all at once. This last option is what I did most often. Instead of having to type in many commands at once I could simply write a test batch file that included all the operations and commands I would like to test. Then I could provide the batch file as input to the program and quickly analyze the results.

Below is an example of the cat program being used to print to the console the contents of the test batch file.



(screenshot of help command)