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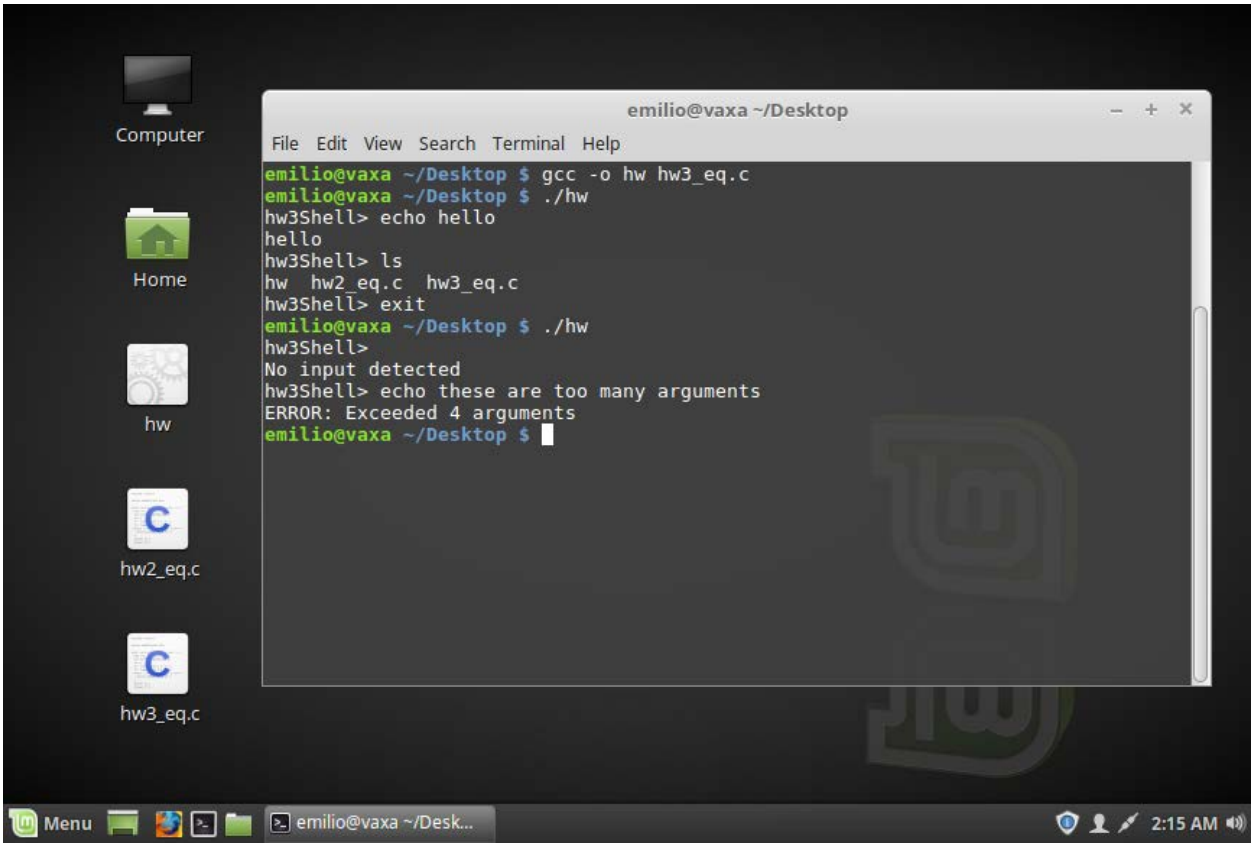
Homework 3

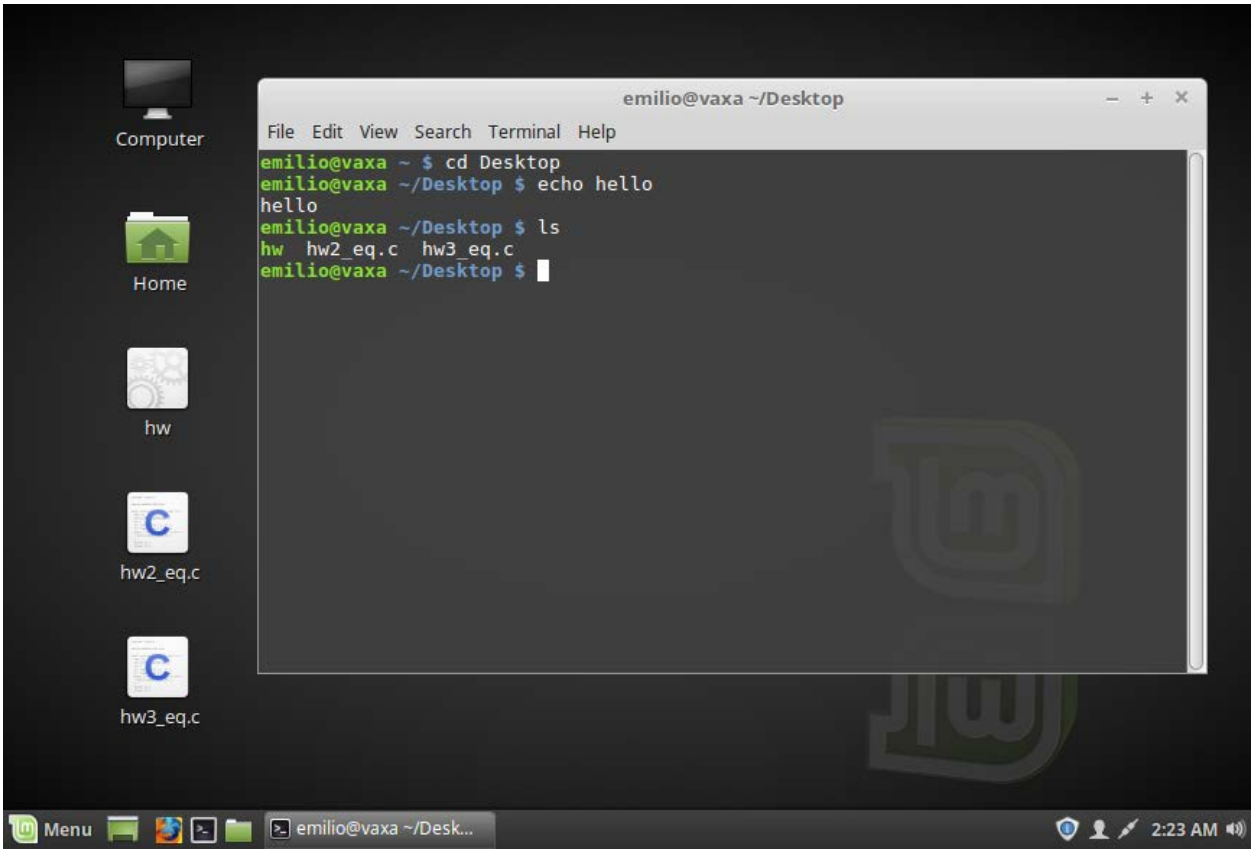
Overview

This program implements a shell running on top of the regular command line for Linux. The shell reads the user's input into a 1024 byte buffer then parses and executes the commands by forking / creating new processes. To achieve this, the shell parses the inputted string into a collection of substrings which will represent the executable file and any command-line arguments. The shell then calls fork() then execvp() and waits for child processes to complete after each command. The user will also know the shell is running when "hw3Shell>" is printed. The user may input up to four command-line arguments. If the user inputs an empty line or inputs more than four arguments, an error will be reported and a new line of input will be fetched. The shell continues to run until an 'exit' command is inputted or if an error occurs.

Testing

Below is a screenshot of running the shell. I tested it using 'echo' and 'ls' commands and exiting the shell. I also test using too many arguments and entering an empty line. The next screenshot I use the same 'echo' and 'ls' commands in the regular command-line interpreter on the same machine.




Computer
Home
hw
hw2_eq.c
hw3_eq.c
emilio@vaxa ~/Desktop
File Edit View Search Terminal Help
emilio@vaxa ~ $ cd Desktop
emilio@vaxa ~/Desktop $ echo hello
hello
emilio@vaxa ~/Desktop $ ls
hw hw2_eq.c hw3_eq.c
emilio@vaxa ~/Desktop $
Menu
emilio@vaxa ~/Desk...
2:23 AM