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Assignment 3 - Simple Shell

Description:

The purpose of this assignment to famarilize reading user inputs, parse and execute those commands using fork() and understand the fork(), exec functions and wait.

Approach / What I Did:

I used fget function to read the user inputs and prevent buffer overflowing. I counted the spaces in the buffer to find out the the number substrings. After that, I used strtok() to divide up the substrings and I removed the “\n” at the end of each substring using strcspn function before storing them into the char pointer array. At the end, I used the char pointer array to fork(), execvp() and wait() to create new process.

Issues and Resolutions:

I had a lot of issues while parsing the user inputs and storing them in the char pointer array. I kept getting segmentation fault while storing the substrings. I fixed this issues by counting the spaces first and then use the space count to accurately allocate the substrings in the char pointer array.

The second issues is not using the temp pointer to count the space and only last substring was getting stored in the char pointer array. This issues is easily fixed by using temp pointer.

The third issues is execvp() not working correctly and then I later found out there is a “\n” at the end of each substring. This issues was fixed by removing strcspn function before storing the substring to the char pointer array.

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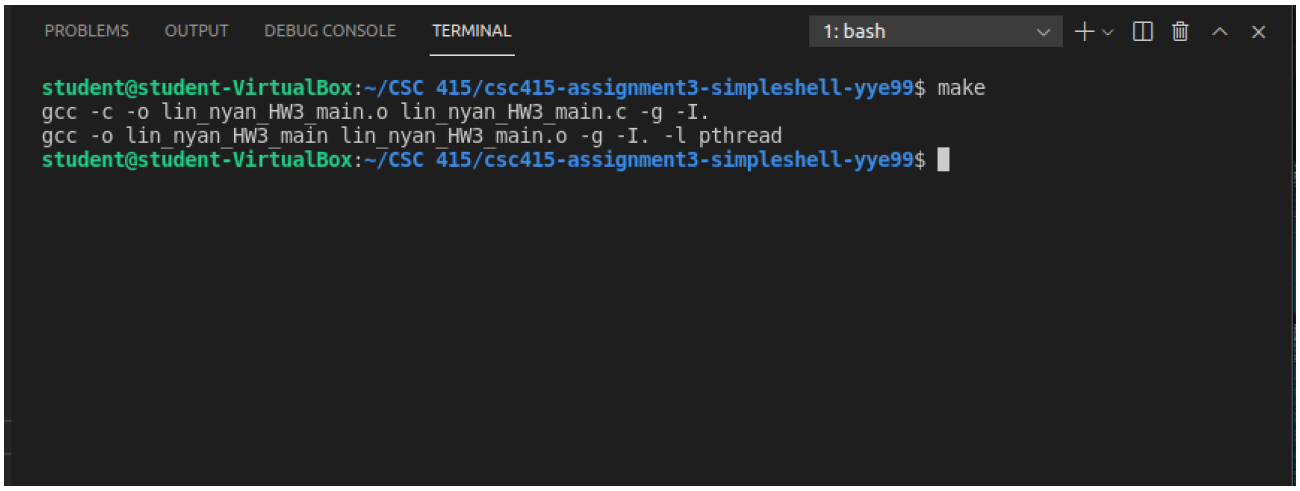
Screenshot of compilation:



Screenshot of the execution of the program: