

Kayvaun Khoshkhou

Git ID: kayvaunSF

920357344

CSC415-03 Fall 2021

09/23/2021

Professor Bierman

Assignment 3 - Simple Shell

Description:

This program is a simple shell terminal that takes in commands that I defined and operates the shell commands correctly.

Approach:

In order to go about approaching this project, I took time to simply think about what are some of the most common uses I use a shell terminal for. To navigate the folders of my PC, so the commands I opted towards using reflect what I have commonly seen or used in the past. I didn't want to make the library of commands too large, so I set the max number of arguments to be 6. I then created a while loop to have the user stay within the shell even after completing inputs that were valid or invalid. I opted to insert an exit path if the user entered "exit" to escape the program loop. And if anything invalid was entered the program would print an error message.

Issues:

I did not face any major issues with this assignment besides finding a way to get started. Starting a project from scratch has always been very difficult for me, and my current life schedule is very limiting, I had to sacrifice a lot of personal time to complete the assignment correctly even though the submission is late.

Analysis:

Analyzing what was completed I feel I hit many of the points right on the head and completed this project successfully. I'm very proud of the work but I'm ready to receive any critical criticism to further improve my understanding and future assignments.

Screenshots of Compilation:

```
C khoshkhou_kayvaunHW3_main.c > ...
4  * Student ID: 920357344
5  * GitHub ID: kayvaunSF
6  * Project: Assignment 3 - Simple Shell
7  *
8  * File: khoshkhou_kayvaunHW3
9  *
10 * Description: Making a simple shell that takes in 6 commands that I defined, and works the
11 *             shell commands correctly.
12 *
13 *****/
14
15
16 #include <stdlib.h>
17 #include <stdio.h>
18 #include <unistd.h>
19 #include <string.h>
20
21 #define BUFFER_SIZE 512
22 #define DELIMITERS " \r\n"
23 #define MAX_ARGS 6 // this allows up to 6 commands
24
25 int main(int argc, char **argv) {
    ...
}

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL

Myshell> ls
commands.txt khoshkhou_kayvaunHW3_main khoshkhou_kayvaunHW3_main.c Makefile README.md
Child: 23600 exited with 0
Myshell> echo "Hello World"
"Hello World"
Child: 23602 exited with 0
Myshell> ps
  PID TTY          TIME CMD
 1674 ?            00:00:00 systemd
 1675 ?            00:00:00 (sd-pam)
 1688 ?            00:00:00 gnome-keyring-d
 1702 ?            00:00:00 dbus-daemon
 1805 ?            00:00:00 VBoxClient
 1806 ?            00:00:00 VBoxClient
 1816 ?            00:00:00 VBoxClient
 1817 ?            00:00:00 VBoxClient
```

```
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL

Myshell> ls -l -a
total 48
drwxrwxr-x 4 student student 4096 Sep 23 22:06 .
drwxr-xr-x 7 student student 4096 Sep 22 23:16 ..
-rw-rw-r-- 1 student student  40 Sep 23 21:59 commands.txt
drwxrwxr-x 8 student student 4096 Sep 22 23:16 .git
-rwxrwxr-x 1 student student 12080 Sep 23 22:06 khoshkhou_kayvaunHW3_main
-rw-rw-r-- 1 student student 2556 Sep 23 22:05 khoshkhou_kayvaunHW3_main.c
-rw-rw-r-- 1 student student 1774 Sep 23 13:13 Makefile
-rw-rw-r-- 1 student student 5010 Sep 23 13:13 README.md
drwxrwxr-x 2 student student 4096 Sep 23 17:24 .vscode
Child: 24164 exited with 0
Myshell> 
```