



Group19

MY SHELL

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Introduction

Our group was tasked to develop a functional Linux shell named MyShell to deepen understanding of shell programming. Shell programming is fundamental in automating tasks and managing system resources efficiently.

Overview of assignment

Develop a simple Linux shell called Myshell

Implementation of Required Internal commands

myhelp

The '**displayHelp**' function launches the '**more**' command in a way that allows the shell to interact with it, facilitating the display of help documentation. If this interaction setup fails, it prints an error message using '**perror**' and exits.

mydir<directory>

Myclr

A function that clears the screen. It makes a system call to a linux predefined function '**clear**'.

The function '**listDirectory**' lists the contents of either the current directory or a specified directory using the '**ls**' command. It executes the command via '**system()**' function, handling NULL directory for the current directory and constructing the command string accordingly.

MORE COMMANDS

myecho<comment>

The function '**echo**' prints a given comment if it's not **NULL**, followed by a newline character. If the comment is **NULL**, it prints only a newline character.

myone

Generates a random password of a specified length by selecting characters from a predefined set, using the current time as a seed for randomness. It then prints the generated password to the console

mycd<directory>

The function '**changeDirectory**' either displays the current directory or changes to a specified directory, updating environment variables '**PWD**' and '**OLDPWD**' accordingly. It handles errors using '**perror**'.

MORE COMMANDS

myenviron

The function '**listEnvironment**' prints the environment variables and their values by iterating through the '**environ**' array, which contains the environment variables of the program. It uses '**printf**' to print each variable-value pair.

mypause

The '**pauseExecution**' function prompts the user to press **Enter** to continue execution. It enters a loop that continues until it detects the **Enter** key press, consuming any characters entered before **Enter** key.

myquit

The '**quitShell**' function simply prints a message indicating the shell is exiting and then terminates the program using '**exit(0)**'.



KEY TAKEAWAYS

04

Shell Control:

- ‘**quitShell**’ terminates the shell by printing a message and exiting.

01

03

02

04

Environment Variables:

- ‘**listEnvironment**’ lists all environment variables and their values.

Directory Manipulation:

- Functions ‘**changeDirectory**’ and ‘**listDirectory**’ handle directory operations, such as changing and listing contents.

User Interaction:

- ‘**echo**’ function prints comments or newline characters based on input.
- ‘**pauseExecution**’ prompts the user to press Enter to continue.

Our Team



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Electronics Engineer
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THANK YOU