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Command Line Interpreter

Summary:

An operating system interface with a user through a Command Line Interpreter (CLI). A CLI is a software module capable of interpreting textual commands coming either from the user's keyboard or from a script file.

The project is built using Java, Intellij.

Description:

This CLI project prompts the user to enter the input through the keyboard. After a sequence of characters is entered followed by a return, the string is parsed, and the indicated command (s) executed. The user is then again prompted for another command. The program implements some built-in commands; the list of the commands is listed below. This means that the program implements these commands directly by using the system without using the function "exec" in Java to implement any of these commands. The main is in Parser.java.

Commands:

All commands and parameters are parsed, verified, and then executed. If the user enters wrong command or bad parameters, the program prints some error messages. For example, if the user writes mkdir, the program responses by an error message as the command mkdir should have one parameter.

This program handles different parameters for each command. For example, if the user writes cd C:/ then it changes to directory C:/ in case of the current directory is D:/. On the other hand, if the user writes cd only then the program changes to default directory, command parameters are either strings or quoted.
Commands: clear, cd, ls, cp, mv, rm, mkdir, rmdir, cat, more, pwd.
Other commands also: a. args - list all parameters on the command line, numbers or strings specific command. For example, args cp prints Number of args is 2: Source Path, Destination Path
b. date - output current system date and time. c. help - list all user commands and the syntax of their arguments.

Redirecting also is implemented (i.e. > and >>) to output the result of command to some file.

The interpreter allows any "possible" combination of all the above features using "|" pipe operator. For example, if the user enters cd C:/ | pwd the program first changes the current directory to C:/ and then displays to the user the content of the current directory which is C:/