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🖼️ **EXAMS**

Exam Rank 04

Minihell part 2 (oh nooo again ?!)

The Rank 4 exam of 42 is quite simple: **just recreate a micro shell**.

Subject

`Allowed functions:`

> malloc, free, write, close, fork, waitpid, signal, kill, exit, chdir, execve, dup, dup2, pipe, strcmp, strncmp

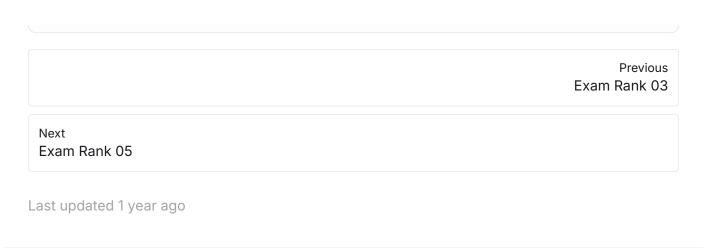Write a program that will behave like executing a shell command

- The command line to execute will be the arguments of this program

- Executable's path will be absolute or relative but your program must not build a path (from the PATH variable for example)

- You must implement "|" and ";" like in bash

  - we will never try a "|" immediately followed or preceded by nothing or "|" or ";"

- Your program must implement the built-in command cd only with a path as argument (no '-' or without parameters)

  - if cd has the wrong number of argument your program should print in STDERR "error: cd: bad arguments" followed by a '\n'

  - if cd failed your program should print in STDERR "error: cd: cannot change directory to path_to_change" followed by a '\n' with path_to_change replaced by the argument to cd

  - a cd command will never be immediately followed or preceded by a "|"

- You don't need to manage any type of wildcards (*, ~ etc...)

- You don't need to manage environment variables ($BLA ...)

- If a system call, except execve and chdir, returns an error your program should immediatly print "error: fatal" in STDERR followed by a '\n' and the program should exit

- If execve failed you should print "error: cannot execute executable_that_failed" in STDERR followed by a '\n' with executable_that_failed replaced with the path of the failed executable (It should be the first argument of execve)

- Your program should be able to manage more than hundreds of "|" even if we limit the number of "open files" to less than 30.

Example that should work :

```
$>./microshell /bin/ls "|" /usr/bin/grep microshell ";" /bin/echo i love my
microshell
i love my microshell
$>

>./microshell
```

> One solution (that inspired me)

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Last updated 1 year ago

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