



Unix System

minishell 1

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Contents

Administrative details	2
Subject	3
Example	4
Authorized functions	5



Administrative details

- Your sources shall be turned-in on the `PSU_year_minishell1` directory
ex: `PSU_2013_minishell1` for the 2013-2014 solar year
- Your binary shall be compiled with a Makefile.
- The binary shall be named `mysh`



Subject

- You must program a UNIX command interpreter.
- This interpreter shall display a prompt (a simple "\$> " for example) and waits for you to write a command line, validated by a newline.
- The prompt is displayed again only after the command execution.
- The command lines are simple, no pipes, no redirections or any other advanced features.
- The executables are those that we can find in the path indicated in PATH variable.
- If an executable cannot be found, you must display an error message and display the prompt again.
- You shall handle errors without using errno, displaying an appropriate message on the error output.
- You must correctly handle the PATH and the environment (a copy of the system char **environ)
- You must implement a series of builtins : `cd`, `setenv`, `unsetenv`, `env`, `exit`.
- You choose the shell that you wish to use as reference for yours.



Indices Read the manuals



Example

```
1  $> pwd
2  /dev
3  $> ls -l
4  total 0
5  crw-rw---- 1 root video 10, 175 dec 19 09:50 agpgart
6  lrwxrwxrwx 1 root root 3 dec 19 09:50 cdrom -> hdc
7  lrwxrwxrwx 1 root root 3 dec 19 09:50 cdrom0 -> hdc
8  drwxr-xr-x 2 root root 60 dec 19 09:50 cdroms/
9  lrwxrwxrwx 1 root root 3 dec 19 09:50 cdrw -> hdc
10 lrwxrwxrwx 1 root root 11 dec 19 09:50 core -> /proc/kcore
11 drwxr-xr-x 3 root root 60 dec 19 09:50 cpu/
12 drwxr-xr-x 3 root root 60 dec 19 09:50 discs/
13 lrwxrwxrwx 1 root root 3 dec 19 09:50 disk -> hda
14 lrwxrwxrwx 1 root root 3 dec 19 09:50 dvd -> hdc
15 lrwxrwxrwx 1 root root 3 dec 19 09:50 dvdrw -> hdc
16 crw----- 1 root root 29, 0 dec 19 09:50 fb0
17 lrwxrwxrwx 1 root root 13 dec 19 09:50 fd -> /proc/self/fd/
18 brw-rw---- 1 root floppy 2, 0 dec 19 09:50 fd0
19 brw-rw---- 1 root floppy 2, 1 dec 19 09:50 fd1
20 crw-rw-rw- 1 root root 1, 7 dec 19 09:50 full
21 brw-rw---- 1 root root 3, 0 dec 19 09:50 hda
22 brw-rw---- 1 root root 3, 1 dec 19 09:50 hda1
23 brw-rw---- 1 root root 3, 2 dec 19 09:50 hda2
24 brw-rw---- 1 root root 3, 3 dec 19 09:50 hda3
25 brw-rw---- 1 root root 3, 5 dec 19 09:50 hda5
26 brw-rw---- 1 root root 3, 6 dec 19 09:50 hda6
27 $> toto
28 toto: command not found
29 $>
```



Authorized functions

- opendir
- readdir
- closedir
- malloc
- free
- exit
- chdir
- fork
- stat
- lstat
- fstat
- open
- close
- read
- write
- execve
- access
- wait
- waitpid
- wait3
- wait4
- signal
- kill