

Unix System minishell 1

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Administrative details

- Your sources shall be turned-in on the PSU_year_minishell1 directory ex: PSU_2013_minishell1 for the 2013-2014 scolar year
- Your binary shall be compiled with a Makefile.
- \bullet The binary shall be named ${\tt mysh}$







minishell 1

Subject

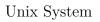
- You must program a UNIX command interpreter.
- This interpreter shall display a prompt (a simple "\$> " for example) and waits for you to write a command line, validated by a newline.
- The prompt is displayed again only after the command execution.
- The command lines are simple, no pipes, no redirections 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, seteny, unseteny, env, exit.
- You choose the shell that you wish to use as reference for yours.



Indices Read the manuals









Example

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





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Authorized functions

 \bullet opendir

Unix System

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

