shell.c

A simple UNIX Shell.

Enter !! to execute the most recent command.

Environmental dependencies

OS: CentOS-8.1.1911-x86_64 Language: C

Installation

Use GNU C Compiler to compile.

```
gcc shell.c -o shell
```

Usage

```
$ ./shell
$ osh> <command>
```

Trace

strace ./shell

Screenshots

```
[root@localhost ~]# gcc shell.c -o shell
[root@localhost ~]# ./shell
osh>!!
No commands in history.
osh>cat test.txt
hello world!
osh>!!
hello world!
osh>
```

```
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                                  root@localhost:~
                                                                               ×
File Edit View Search Terminal Help
[root@localhost ~]# strace ./shell
execve("./shell", ["./shell"], 0x7ffe55b4c000 /* 43 vars */) = 0
                                        = 0xd68000
arch_prctl(0x3001 /* ARCH_??? */, 0x7ffe83fba760) = -1 EINVAL (Invalid argument)
                                        = -1 ENOENT (No such file or directory)
access("/etc/ld.so.preload", R OK)
fstat(3, {st mode=S_IFREG|0644, st_size=72089, ...}) = 0
mmap(NULL, 72089, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f04d53d1000
                                        = 0
openat(AT FDCWD, "/lib64/libc.so.6", O RDONLY|O CLOEXEC) = 3
read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\2009\2\0\0\0\0\0\0"..., 83
2) = 832
fstat(3, {st mode=S IFREG|0755, st size=5993088, ...}) = 0
mmap(NULL, 8192, PROT READ|PROT WRITE, MAP PRIVATE|MAP ANONYMOUS, -1, 0) = 0x7f0
4d53cf000
mmap(NULL, 3942432, PROT READ|PROT EXEC, MAP PRIVATE|MAP DENYWRITE, 3, 0) = 0x7f
04d4df8000
mprotect(0x7f04d4fb1000, 2097152, PROT_NONE) = 0
mmap(0x7f04d51b1000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENY
WRITE, 3, 0x1b9000) = 0x7f04d51b1000
mmap(0x7f04d51b7000, 14368, PROT READ|PROT WRITE, MAP PRIVATE|MAP FIXED|MAP ANON
YMOUS, -1, 0) = 0x7f04d51b7000
close(3)
                                        = 0
```

Contact

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