

shell.c

A simple UNIX Shell.

Enter **!!** to execute the most recent command.

Getting Started

Environmental dependencies

OS: CentOS-8.1.1911-x86_64

Language: C

How to compile?

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

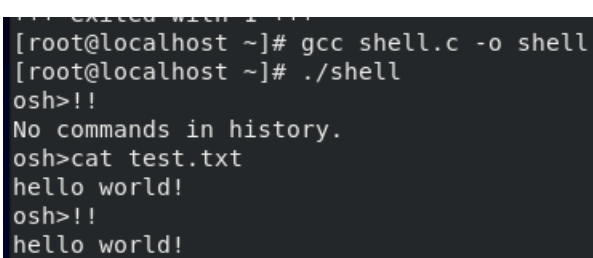
How to run?

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

How to traces system calls?

```
strace ./shell
```

Screenshots



```
*** Exited with 1 ***  
[root@localhost ~]# gcc shell.c -o shell  
[root@localhost ~]# ./shell  
osh>!!  
No commands in history.  
osh>cat test.txt  
hello world!  
osh>!!  
hello world!
```

```
[root@localhost ~]# strace ./shell
execve("./shell", [".shell"], 0x7ffc65fa02c0 /* 43 vars */) = 0
brk(NULL)                               = 0x977000
arch_prctl(0x3001 /* ARCH_??? */, 0x7ffdf025ed00) = -1 EINVAL (Invalid argument)
access("/etc/ld.so.preload", R_OK)      = -1 ENOENT (No such file or directory)
openat(AT_FDCWD, "/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3
fstat(3, {st_mode=S_IFREG|0644, st_size=72089, ...}) = 0
mmap(NULL, 72089, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7fae3e42d000
close(3)                                = 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\0\0\0\3\0>\0\1\0\0\0\2009\2\0\0\0\0\0"... , 832) = 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) = 0x7fae3e42b000
mmap(NULL, 3942432, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7fae3de54000
mprotect(0x7fae3e00d000, 2097152, PROT_NONE) = 0
mmap(0x7fae3e20d000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1b9000) = 0x7fae3e20d000
```

How to contact me?

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