filecopy.c

A file-copying program named filecopy using ordinary pipes.

Environmental dependencies

OS: CentOS-8.1.1911-x86_64
Language: C

Installation

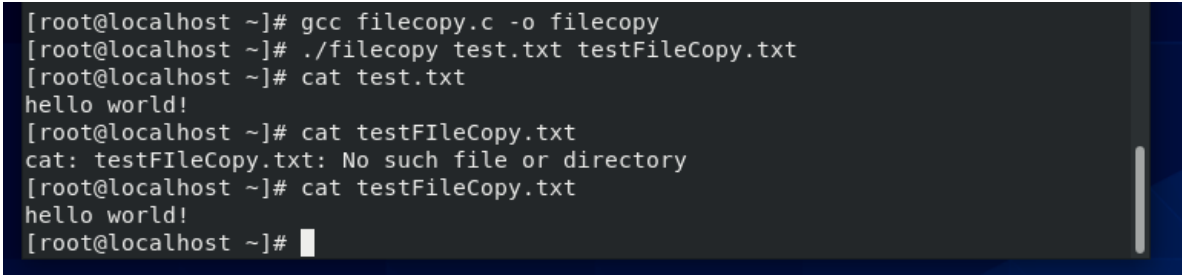Use GNU C Compiler to compile.

```
gcc filecopy.c -o filecopy
```

Usage

```
./filecopy <source file> <destination file>
```

Trace

```
strace ./filecopy
```

Screenshots

```
[root@localhost ~]# gcc filecopy.c -o filecopy
[root@localhost ~]# ./filecopy test.txt testFileCopy.txt
[root@localhost ~]# cat test.txt
hello world!
[root@localhost ~]# cat testFIleCopy.txt
cat: testFIleCopy.txt: No such file or directory
[root@localhost ~]# cat testFileCopy.txt
hello world!
[root@localhost ~]#
```

```
[root@localhost ~]# strace ./filecopy
execve("./filecopy", ["./filecopy"], 0x7ffc40f8d1a0 /* 43 vars */) = 0
brk(NULL)                               = 0x19e8000
arch_prctl(0x3001 /* ARCH_??? */, 0x7ffe3fbcbf90) = -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) = 0x7f695547f000
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\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) = 0x7f6
95547d000
mmap(NULL, 3942432, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f
6954ea6000
mprotect(0x7f695505f000, 2097152, PROT_NONE) = 0
mmap(0x7f695525f000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENY
WRITE, 3, 0x1b9000) = 0x7f695525f000
mmap(0x7f6955265000, 14368, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANON
YMOUS, -1, 0) = 0x7f6955265000
```

Contact

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