

NAME

fread, fwrite – binary stream input/output

SYNOPSIS

```
#include <stdio.h>
```

```
size_t fread(void *ptr, size_t size, size_t nmemb, FILE *stream);
```

```
size_t fwrite(const void *ptr, size_t size, size_t nmemb,
              FILE *stream);
```

DESCRIPTION

The function **fread()** reads *nmemb* items of data, each *size* bytes long, from the stream pointed to by *stream*, storing them at the location given by *ptr*.

The function **fwrite()** writes *nmemb* items of data, each *size* bytes long, to the stream pointed to by *stream*, obtaining them from the location given by *ptr*.

For nonlocking counterparts, see **unlocked_stdio(3)**.

RETURN VALUE

On success, **fread()** and **fwrite()** return the number of items read or written. This number equals the number of bytes transferred only when *size* is 1. If an error occurs, or the end of the file is reached, the return value is a short item count (or zero).

fread() does not distinguish between end-of-file and error, and callers must use **feof(3)** and **ferror(3)** to determine which occurred.

ATTRIBUTES

For an explanation of the terms used in this section, see **attributes(7)**.

Interface	Attribute	Value
fread() , fwrite()	Thread safety	MT-Safe

CONFORMING TO

POSIX.1-2001, POSIX.1-2008, C89.

SEE ALSO

read(2), **write(2)**, **feof(3)**, **ferror(3)**, **unlocked_stdio(3)**

COLOPHON

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