

NAME

fgetpos, fseek, fseeko, fsetpos, ftell, ftello, rewind - reposition a stream

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <stdio.h>

int

fseek(*FILE *stream, long offset, int whence*);

long

ftell(*FILE *stream*);

void

rewind(*FILE *stream*);

int

fgetpos(*FILE * restrict stream, fpos_t * restrict pos*);

int

fsetpos(*FILE *stream, const fpos_t *pos*);

#include <sys/types.h>

int

fseeko(*FILE *stream, off_t offset, int whence*);

off_t

ftello(*FILE *stream*);

DESCRIPTION

The **fseek()** function sets the file position indicator for the stream pointed to by *stream*. The new position, measured in bytes, is obtained by adding *offset* bytes to the position specified by *whence*. If *whence* is set to SEEK_SET, SEEK_CUR, or SEEK_END, the offset is relative to the start of the file, the current position indicator, or end-of-file, respectively. A successful call to the **fseek()** function clears the end-of-file indicator for the stream and undoes any effects of the **ungetc(3)** and **ungetwc(3)** functions on the same stream.

The **ftell()** function obtains the current value of the file position indicator for the stream pointed to by *stream*.

The **rewind()** function sets the file position indicator for the stream pointed to by *stream* to the beginning of the file. It is equivalent to:

```
(void)fseek(stream, 0L, SEEK_SET)
```

except that the error indicator for the stream is also cleared (see `clearerr(3)`).

Since **rewind()** does not return a value, an application wishing to detect errors should clear *errno*, then call **rewind()**, and if *errno* is non-zero, assume an error has occurred.

The **fseeko()** function is identical to **fseek()**, except it takes an *off_t* argument instead of a *long*. Likewise, the **ftello()** function is identical to **ftell()**, except it returns an *off_t*.

The **fgetpos()** and **fsetpos()** functions are alternate interfaces for retrieving and setting the current position in the file, similar to **ftell()** and **fseek()**, except that the current position is stored in an opaque object of type *fpos_t* pointed to by *pos*. These functions provide a portable way to seek to offsets larger than those that can be represented by a *long int*. They may also store additional state information in the *fpos_t* object to facilitate seeking within files containing multibyte characters with state-dependent encodings. Although *fpos_t* has traditionally been an integral type, applications cannot assume that it is; in particular, they must not perform arithmetic on objects of this type.

If the stream is a wide character stream (see `fwide(3)`), the position specified by the combination of *offset* and *whence* must contain the first byte of a multibyte sequence.

RETURN VALUES

The **rewind()** function returns no value.

The **fgetpos()**, **fseek()**, **fseeko()**, and **fsetpos()** functions return the value 0 if successful; otherwise the value -1 is returned and the global variable *errno* is set to indicate the error.

Upon successful completion, **ftell()** and **ftello()** return the current offset. Otherwise, -1 is returned and the global variable *errno* is set to indicate the error.

ERRORS

[EBADF] The *stream* argument is not a seekable stream.

[EINVAL] The *whence* argument is invalid or the resulting file-position indicator would be

set to a negative value.

[EOVERFLOW] The resulting file offset would be a value which cannot be represented correctly in an object of type *off_t* for **fseeko()** and **ftello()** or *long* for **fseek()** and **ftell()**.

[ESPIPE] The file descriptor underlying stream is associated with a pipe or FIFO or file-position indicator value is unspecified (see **ungetc(3)**).

The functions **fgetpos()**, **fseek()**, **fseeko()**, **fsetpos()**, **ftell()**, **ftello()**, and **rewind()** may also fail and set *errno* for any of the errors specified for the routines **fflush(3)**, **fstat(2)**, **lseek(2)**, and **malloc(3)**.

SEE ALSO

lseek(2), **clearerr(3)**, **fwide(3)**, **ungetc(3)**, **ungetwc(3)**

STANDARDS

The **fgetpos()**, **fsetpos()**, **fseek()**, **ftell()**, and **rewind()** functions conform to ISO/IEC 9899:1990 ("ISO C90").

The **fseeko()** and **ftello()** functions conform to IEEE Std 1003.1-2001 ("POSIX.1").

HISTORY

The functions **fseek()**, **ftell()**, and **rewind()** first appeared in Version 7 AT&T UNIX.