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.