

NAME

`fopen`, `freopen`, `fdopen` — open a stream

SYNOPSIS

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

```
FILE *fopen (filename, type)
```

```
char *filename, *type;
```

```
FILE *freopen (filename, type, stream)
```

```
char *filename, *type;
```

```
FILE *stream;
```

```
FILE *fdopen (fildes, type)
```

```
int fildes;
```

```
char *type;
```

DESCRIPTION

Fopen opens the file named by *filename* and associates a stream with it. *Fopen* returns a pointer to be used to identify the stream in subsequent operations.

Type is a character string having one of the following values:

"r" open for reading

"w" create for writing

"a" append; open for writing at end of file, or create for writing

"r+" open for update (reading and writing)

"w+" create for update

"a+" append; open or create for update at end of file

Freopen substitutes the named file in place of the open *stream*. It returns the original value of *stream*. The original stream is closed, regardless of whether the open ultimately succeeds.

Freopen is typically used to attach the preopened constant names, `stdin`, `stdout`, `stderr`, to specified files.

Fdopen associates a stream with a file descriptor obtained from *open*, *dup*, *creat*, or *pipe(2)*. The *type* of the stream must agree with the mode of the open file.

When a file is opened for update, both input and output may be done on the resulting stream. However, output may not be directly followed by input without an intervening *fseek* or *rewind*, and input may not be directly followed by output without an intervening *fseek*, *rewind*, or an input operation which encounters end of file.

SEE ALSO

`open(2)`, `fclose(3S)`

DIAGNOSTICS

Fopen and *freopen* return the pointer NULL if *filename* cannot be accessed.