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isatty() – Test if descriptor represents a terminal

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Standards

Standards / Extensions	C or C++	Dependencies
POSIX.1	both	
XPG4		
XPG4.2		
Single UNIX Specification, Version 3		

Format

```
#define _POSIX_SOURCE
#include <unistd.h>

int isatty(int fildes);
```

General description

Determines if a file descriptor, *fildes*, is associated with a terminal.

> `isatty()` only works in an environment where either a controlling terminal exists, or `stdin` and `stderr` refer to tty devices. Specifically, it does not work in a TSO environment.

Returned value

`isatty()` returns 1 if the given file descriptor is a terminal, or 0 otherwise.

Special behavior for XPG4

`isatty()` returns 1 if the given file descriptor is a terminal, or 0 otherwise and sets `errno` to one of the following values:

Error Code

Description

EBADF

The *fildes* argument is not a valid open file descriptor.

ENOTTY

The *fildes* argument is not associated with a terminal.

Example

CELEBI03

```
/* CELEBI03
```

```
    This example determines if a file descriptor is  
    associated with a terminal.
```

```
> */  
#define _POSIX_SOURCE  
#include <unistd.h>  
#include <stdio.h>  
#include <sys/types.h>  
#include <sys/stat.h>  
#include <fcntl.h>  
  
void check_fd(int fd) {  
    printf("fd %d is ", fd);  
    if (!isatty(fd))  
        printf("NOT ");  
    puts("a tty");  
}  
  
main() {  
    int p[2], fd;  
    char fn[]="temp.file";  
  
    if (pipe(p) != 0)  
        perror("pipe() error");  
    else {  
        if ((fd = creat(fn, S_IWUSR)) < 0)  
            perror("creat() error");  
        else {  
            check_fd(0);  
            check_fd(fileno(stderr));  
            check_fd(p[1]);  
            check_fd(fd);  
            close(fd);  
            unlink(fn);  
        }  
        close(p[0]);  
        close(p[1]);  
    }  
}
```

Output

```
fd 0 is a tty
fd 2 is a tty
fd 4 is NOT a tty
fd 5 is NOT a tty
```

Related information

- [unistd.h](#)
- [ttyname\(\)](#) - Get the name of a terminal

Parent topic:

→ [Library functions](#)

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