

NAME

`abs`, `labs`, `llabs`, `imaxabs` - compute the absolute value of an integer

SYNOPSIS

```
#include <stdlib.h>

int abs(int j);
long int labs(long int j);
long long int llabs(long long int j);

#include <inttypes.h>

intmax_t imaxabs(intmax_t j);
```

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

```
llabs():
    _XOPEN_SOURCE >= 600 || _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L;
    or cc -std=c99
```

DESCRIPTION

The `abs()` function computes the absolute value of the integer argument *j*. The `labs()`, `llabs()` and `imaxabs()` functions compute the absolute value of the argument *j* of the appropriate integer type for the function.

RETURN VALUE

Returns the absolute value of the integer argument, of the appropriate integer type for the function.

ATTRIBUTES**Multithreading (see [pthreads\(7\)](#))**

The `abs()`, `labs()`, `llabs()`, and `imaxabs()` functions are thread-safe.

CONFORMING TO

SVr4, POSIX.1-2001, 4.3BSD, C99. C89 only includes the `abs()` and `labs()` functions; the functions `llabs()` and `imaxabs()` were added in C99.

NOTES

Trying to take the absolute value of the most negative integer is not defined.

The `llabs()` function is included in glibc since version 2.0. The `imaxabs()` function is included in glibc since version 2.1.1.

For `llabs()` to be declared, it may be necessary to define `_ISOC99_SOURCE` or `_ISOC9X_SOURCE` (depending on the version of glibc) before including any standard headers.

GCC handles `abs()` and `labs()` as built-in functions. GCC 3.0 also handles `llabs()` and `imaxabs()` as built-ins.

SEE ALSO

[cabs\(3\)](#), [ceil\(3\)](#), [fabs\(3\)](#), [floor\(3\)](#), [rint\(3\)](#)

COLOPHON

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