

NAME

abs, labs, llabs, imaxabs, uabs, ulabs, ullabs, umaxabs – compute the absolute value of an integer

LIBRARY

Standard C library (*libc*, *-lc*)

SYNOPSIS

```
#include <stdlib.h>

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

unsigned int uabs(int j);
unsigned long ulabs(long j);
unsigned long long ullabs(long long j);

#include <inttypes.h>

intmax_t imaxabs(intmax_t j);
uintmax_t umaxabs(uintmax_t j);
```

Feature Test Macro Requirements for glibc (see **feature_test_macros(7)**):

```
llabs():
    _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

uabs(), ulabs(), ullabs(), umaxabs():
    _ISOC2Y_SOURCE
```

DESCRIPTION

These 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

For an explanation of the terms used in this section, see **attributes(7)**.

Interface	Attribute	Value
abs(), labs(), llabs(), imaxabs(), uabs(), ulabs(), ullabs(), umaxabs()	Thread safety	MT-Safe

STANDARDS

```
abs()
labs()
llabs()
imaxabs()
    C23, POSIX.1-2024
```

HISTORY

```
abs()    C89, POSIX.1-1996, SVr4, 4.3BSD.
labs()   C89, POSIX.1-2001.
llabs()  C99, POSIX.1-2001; glibc 2.0.
imaxabs()
    C99, POSIX.1-2001; glibc 2.1.1.

uabs()
ulabs()
ullabs()
    C2y; glibc 2.42.
```

umaxabs()

C2y; glibc 2.43.

BUGS

For **abs()**, **labs()**, **llabs()**, and **imaxabs()**, trying to take the absolute value of the most negative integer is not defined.

SEE ALSO

cabs(3), **ceil(3)**, **fabs(3)**, **floor(3)**, **rint(3)**