

NAME

abs, labs, llabs, imaxabs – 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);
```

```
#include <inttypes.h>
```

```
intmax_t imaxabs(intmax_t j);
```

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

```
llabs():
```

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

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

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

Interface	Attribute	Value
abs() , labs() , llabs() , imaxabs()	Thread safety	MT-Safe

STANDARDS

POSIX.1-2001, POSIX.1-2008, C99, SVr4, 4.3BSD.

NOTES

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

The **llabs()** function is included since glibc 2.0. The **imaxabs()** function is included since glibc 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.

By default, GCC handles **abs()**, **labs()**, and (since GCC 3.0) **llabs()** and **imaxabs()** as built-in functions.

SEE ALSO

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