

**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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