

**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
<b>abs()</b> , <b>labs()</b> , <b>llabs()</b> , <b>imaxabs()</b>	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)**