ABS(3)

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, but is not in libc5 or libc4. 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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