

**NAME**

`tolower`, `tolower_l` – convert a wide character to lowercase

**SYNOPSIS**

```
#include <wctype.h>
```

```
wint_t tolower(wint_t wc);
```

```
wint_t tolower_l(wint_t wc, locale_t locale);
```

Feature Test Macro Requirements for glibc (see **feature\_test\_macros(7)**):

**tolower\_l()**:

Since glibc 2.10:

```
_XOPEN_SOURCE >= 700
```

Before glibc 2.10:

```
_GNU_SOURCE
```

**DESCRIPTION**

The **tolower()** function is the wide-character equivalent of the **tolower(3)** function. If *wc* is an uppercase wide character, and there exists a lowercase equivalent in the current locale, it returns the lowercase equivalent of *wc*. In all other cases, *wc* is returned unchanged.

The **tolower\_l()** function performs the same task, but performs the conversion based on the character type information in the locale specified by *locale*. The behavior of **tolower\_l()** is undefined if *locale* is the special locale object **LC\_GLOBAL\_LOCALE** (see **duplocale(3)**) or is not a valid locale object handle.

The argument *wc* must be representable as a *wchar\_t* and be a valid character in the locale or be the value **WEOF**.

**RETURN VALUE**

If *wc* was convertible to lowercase, **tolower()** returns its lowercase equivalent; otherwise it returns *wc*.

**VERSIONS**

The **tolower\_l()** function first appeared in glibc 2.3.

**ATTRIBUTES**

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

Interface	Attribute	Value
<b>tolower()</b>	Thread safety	MT-Safe locale
<b>tolower_l()</b>	Thread safety	MT-Safe

**CONFORMING TO**

**tolower()**: C99, POSIX.1-2001 (XSI); present as an XSI extension in POSIX.1-2008, but marked obsolete.

**tolower\_l()**: POSIX.1-2008.

**NOTES**

The behavior of these functions depends on the **LC\_CTYPE** category of the locale.

These functions are not very appropriate for dealing with Unicode characters, because Unicode knows about three cases: upper, lower and title case.

**SEE ALSO**

**iswlower(3)**, **towctrans(3)**, **towupper(3)**, **locale(7)**

**COLOPHON**

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