

NAME

`toupper`, `toupper_l` – convert a wide character to uppercase

SYNOPSIS

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

```
wint_t toupper(wint_t wc);
```

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

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

toupper_l():

Since glibc 2.10:

```
_XOPEN_SOURCE >= 700
```

Before glibc 2.10:

```
_GNU_SOURCE
```

DESCRIPTION

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

The **toupper_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 **toupper_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 uppercase, **toupper()** returns its uppercase equivalent; otherwise it returns *wc*.

VERSIONS

The **toupper_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
toupper()	Thread safety	MT-Safe locale
toupper_l()	Thread safety	MT-Safe

CONFORMING TO

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

toupper_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

[iswupper\(3\)](#), [towctrans\(3\)](#), [towlower\(3\)](#), [locale\(7\)](#)

COLOPHON

This page is part of release 5.05 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.