

std::tolower

Defined in header `<cwctype>`

```
std::wint_t tolower( std::wint_t ch );
```

Converts the given wide character to lowercase, if possible.

If the value of `ch` is neither representable as a `wchar_t` nor equal to the value of the macro `WEOF`, the behavior is undefined.

Parameters

`ch` - wide character to be converted

Return value

Lowercase version of `ch` or unmodified `ch` if no lowercase version is listed in the current C locale.

Notes

Only 1:1 character mapping can be performed by this function, e.g. the Greek uppercase letter `'Σ'` has two lowercase forms, depending on the position in a word: `'σ'` and `'ς'`. A call to `std::tolower` cannot be used to obtain the correct lowercase form in this case.

[ISO 30112](#) specifies which pairs of Unicode characters are included in this mapping.

Example

```
#include <locale>
#include <cwctype>
#include <iostream>

int main()
{
    wchar_t c = L'\u0190'; // Latin capital open E ('É')

    std::cout << std::hex << std::showbase;
    std::cout << "in the default locale, tolower("
        << static_cast<std::wint_t>(c) << ") = "
        << std::tolower(c) << '\n';
    std::setlocale(LC_ALL, "en_US.utf8");
    std::cout << "in Unicode locale, tolower("
        << static_cast<std::wint_t>(c) << ") = "
        << std::tolower(c) << '\n';
}
```

Output:

```
in the default locale, tolower(0x190) = 0x190
in Unicode locale, tolower(0x190) = 0x25b
```

See also

<code>toupper</code>	converts a wide character to uppercase (function)
<code>tolower</code> (<code>std::locale</code>)	converts a character to lowercase using the <code>ctype</code> facet of a locale (function template)
<code>tolower</code>	converts a character to lowercase (function)

[C documentation](#) for `tolower`