

Item 2: Case-Insensitive String

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1 Questions

So you want a case-insensitive string class? Your mission, should you choose to accept it, is to write one.

1. What does "case-insensitive" mean?
2. Write a `ci_string` class that is identical to the standard `std::string` but that is case-insensitive in the same way as the commonly provided extension `stricmp()` . A `ci_string` should be usable as follows:

```
ci_string s( "AbCdE" );

// case insensitive
assert( s == "abcde" );
assert( s == "ABCDE" );

// still case-preserving, of course
assert( strcmp( s.c_str(), "AbCdE" ) == 0 );
assert( strcmp( s.c_str(), "abcde" ) != 0 );
```

3. Is making case sensitivity a property of the object a good idea?

2 Answer

1. Case-insensitivity is a suprising non-trivial. It depends on the language, encoding, and the application.
2. There can be several ways to do this. One approach is to make a wrapper around `std::string`. However, note that the standard library already provides `std::basic_string` (of which `std::string` is a specialization). This template class can be customized with `char_traits`. See `./item_02_ci_string.hpp` for details.
3. Maybe it's more flexible to have separate functions first.