Synopsis

The Best-Selling C++ Resource  Now Updated for C++11  The C++ standard library provides a set of common classes and interfaces that greatly extend the core C++ language. The library, however, is not self-explanatory. To make full use of its components “and to benefit from their power” you need a resource that does far more than list the classes and their functions. The C++ Standard Library: A Tutorial and Reference, Second Edition, describes this library as now incorporated into the new ANSI/ISO C++ language standard (C++11). The book provides comprehensive documentation of each library component, including an introduction to its purpose and design; clearly written explanations of complex concepts; the practical programming details needed for effective use; traps and pitfalls; the exact signature and definition of the most important classes and functions; and numerous examples of working code. The book focuses in particular on the Standard Template Library (STL), examining containers, iterators, function objects, and STL algorithms. The book covers all the new C++11 library components, including Concurrency Fractional arithmetic Clocks and timers Tuples New STL containers New STL algorithms New smart pointers New locale facets Random numbers and distributions Type traits and utilities Regular expressions The book also examines the new C++ programming style and its effect on the standard library, including lambdas, range-based for loops, move semantics, and variadic templates. An accompanying Web site, including source code, can be found at www.cppstdlib.com.

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Customer Reviews

On my second reading, I'm still finding more gems in this book. Up to now, it was almost impossible to find any comprehensive material on the standard library. All one could find was the odd article about some aspect of the library, or rather specialized books about STL. Nicolai has fixed that particular problem once and for all. The book reminds of Richard Stevens's famous UNIX books. Incredibly complete, incredibly detailed, incredibly accurate, and a great tutorial and reference at the same time. And, best of all, it's just as accessible to someone who is not a real expert as it is for someone who's been using C++ for years. This is one of the "very" few books that get a spot on my top shelf. A classic that I will come back to again and again.

The print version of this book would receive the full 5-stars from me, but the e-book version delivered to my Kindle had poorly formatted code and the tables were practically unreadable. The issue with the code is that the font used was not consistently mono-spaced and there were plethora of syntactically incorrect line-breaks. I had to lower my font size to the lowest possible setting and orient the layout horizontally to make the code less chore-some. The code images themselves were so small (although properly formatted A-style code) that I had to strain my eyes. There was no happy medium here: either deal with impractical formatting or ruin your eyesight on the code images. The tables and inline graphics were abysmally small graphics, much like the code pictures. If I had to purchase this book again I would definitely have shelled out the extra money for the print version. I am satisfied with the content but not the formatting of the e-book version, and will be looking forward to an update to the e-book version.

Mr. Josuttis offers in this book an amazingly comprehensive guide to the often bewildering C++ standard library. I originally purchased this book looking for more STL information, and I was certainly not disappointed in that respect. STL descriptions account for nearly half of the book volume. However, as non-STL questions arose, I found myself digging into this book time and time again (questions about auto_ptr, string class, allocators, etc). If you're a C++ programmer and do not already own a current (circa 1999 or later) library reference, do yourself and your code a favor and grab a copy of this book. C++ is an extremely scalable language. It's easy to use only knowing a small subset of the language and library features. Having a reference such as this one ensures that you'll be less likely to accidentally duplicate work that has already been done for you in the standard
As far as book organization goes, I'd say that the book does lean more towards "reference" rather than "tutorial", but I never believe a book that claims to be both anyhow. Anyone interested in a pure tutorial should buy a book specifically written with that in mind. For more experienced programmers not needing quite as much hand holding, however, the book does work as advertised. Overall, I can't really recommend this book more enthusiastically.

My colleagues and I are extremely impressed with both the organization and thoroughness of "The C++ Standard Library". Prior to the purchase of this book, we had consulted 3 other STL books for help in writing our software. All 3 of the other books constantly frustrated us by making it almost impossible to locate information quickly and by omitting key facts. We were, therefore, acutely aware of the inadequacies of the available texts and were, as a result, all the more appreciative of this book and excited to find it. Features I particularly like include: (1) The index is possibly the most inclusive and well organized I have seen anywhere. Under the listing for each container type, for instance, is an indented listing of all associated algorithms, etc and the respective page numbers. (2) For each container type the text includes a listing of any required headers, a concise definition of the stl template/class with all associated constructors and destructors (a very useful feature), and extensive example code. (3) The example code fragments are well documented and point out any anomalies which will result in potential run time errors; sadly, other texts we consulted failed to warn us of these potential run-time errors, one of which cost us a few hours of testing/debugging time. The above list of "likes" is by no means all-inclusive. In short, if I were planning to buy only 1 STL reference, it would be "The C++ Standard Library" by Nicolai Josuttis.

The book is subtitled "a tutorial and reference". Let it be said that it is more of a reference. There are several concise examples that explain how to use the features, but the writing style is fairly terse. This book is an excellent supplement to books such as Bjarne Stroustrup’s "The C++ Programming Language". The discussion about how to use the standard library is more detailed than other books. The reason why I am giving this book five stars is because it is the best reference on the standard library that I have found anywhere. The examples are both minimal and complete -- just enough code to explain how the features should be used. I wouldn’t say that this is a book you should have on your shelf -- it belongs on your desk.

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