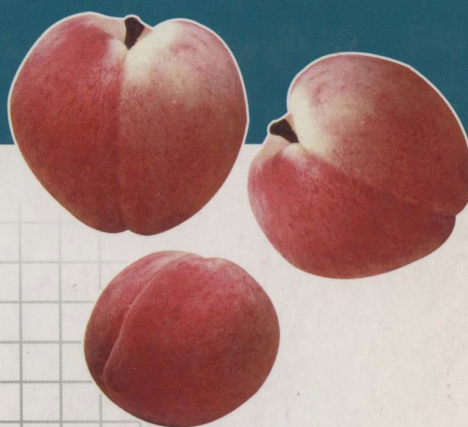


大学计算机教育国外著名教材系列 (影印版)

THE C++ STANDARD LIBRARY

A TUTORIAL AND REFERENCE

C++标准库教程



Nicolai M. Josuttis 著



清华大学出版社

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内 容 简 介

C++标准库提供了一组通用类和接口，从而极大地拓展了核心C++语言。但是，要高效地利用C++标准库进行开发，只知道标准库的类名及其函数名是不够的，还需要更深入地学习和掌握。本书正是基于这种需要而编写的。

本书以最新的C++标准库为基础，不仅介绍了C++标准库及其所有组件，而且还讲述了如何在实际编程中高效地使用它们。本书的重点是标准模板库（STL），详细介绍了标准模板库的容器、迭代器、函数对象以及STL算法。对标准库的每个组件，不仅介绍了其作用和设计方法，而且还给出了相应的范例、详细的描述、可能的陷阱，以及各组件的类及其函数的正确书写和定义。

本书讲解全面、详尽、易懂，而且与实际的编程开发紧密相连，不仅可以作为C++高级开发的教材，而且可作为开发人员的案头参考书，以供随时查阅。

本书网站 <http://www.josuttis.com/libbook>提供了书中的源代码下载。

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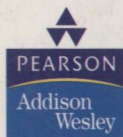
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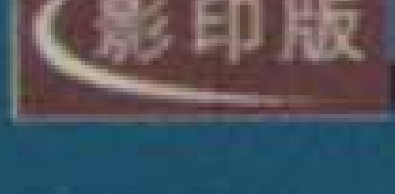
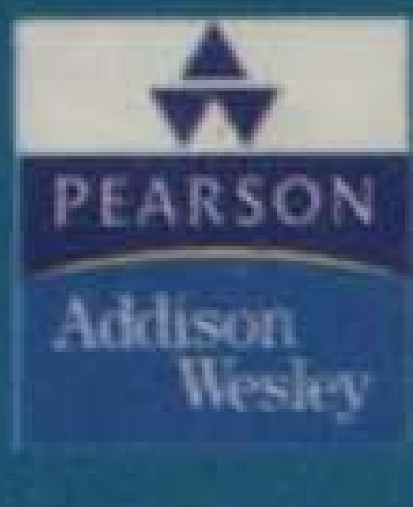


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The C++ Standard Library

A Tutorial and Reference

C++标准库教程

Nicolai M. Josuttis

清华大学出版社
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出版说明

进入 21 世纪,世界各国的经济、科技以及综合国力的竞争将更加激烈。竞争的中心无疑是对人才的竞争。谁拥有大量高素质的人才,谁就能在竞争中取得优势。高等教育,作为培养高素质人才的事业,必然受到高度重视。目前我国高等教育的教材更新较慢,为了加快教材的更新频率,教育部正在大力促进我国高校采用国外原版教材。

清华大学出版社从 1996 年开始,与国外著名出版公司合作,影印出版了“大学计算机教育丛书(影印版)”等一系列引进图书,受到国内读者的欢迎和支持。跨入 21 世纪,我们本着为我国高等教育教材建设服务的初衷,在已有的基础上,进一步扩大选题内容,改变图书开本尺寸,一如既往地请有关专家挑选适用于我国高校本科及研究生计算机教育的国外经典教材或著名教材,组成本套“大学计算机教育国外著名教材系列(影印版)”,以飨读者。深切期盼读者及时将使用本系列教材的效果和意见反馈给我们。更希望国内专家、教授积极向我们推荐国外计算机教育的优秀教材,以利我们把“大学计算机教育国外著名教材系列(影印版)”做得更好,更适合高校师生的需要。

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Preface

In the beginning, I only planned to write a small German book (400 pages or so) about the C++ standard library. That was in 1993. Now, in 1999 you see the result — an English book with more than 800 pages of facts, figures, and examples. My goal is to describe the C++ standard library so that all (or almost all) your programming questions are answered before you think of the question. Note, however, that this is not a complete description of all aspects of the C++ standard library. Instead, I present the most important topics necessary for learning and programming in C++ by using its standard library.

Each topic is described based on the general concepts; this discussion then leads to the specific details needed to support every-day programming tasks. Specific code examples are provided to help you understand the concepts and the details.

That's it — in a nutshell. I hope you get as much pleasure from reading this book as I did from writing it. Enjoy!

Acknowledgments

This book presents ideas, concepts, solutions, and examples from many sources. In a way it does not seem fair that my name is the only name on the cover. Thus, I'd like to thank all the people and companies who helped and supported me during the past few years.

First, I'd like to thank Dietmar Kühl. Dietmar is an expert on C++, especially on input/output streams and internationalization (he implemented an I/O stream library just for fun). He not only translated major parts of this book from German to English, he also wrote sections of this book using his expertise. In addition, he provided me with invaluable feedback over the years.

Second, I'd like to thank all the reviewers and everyone else who gave me their opinion. These people endow the book with a quality it would never have had without their input. (Because the list is extensive, please forgive me for any oversight.) The reviewers for the English version of this book included Chuck Allison, Greg Comeau, James A. Crotinger, Gabriel Dos Reis, Alan Ezust, Nathan Myers, Werner Mossner, Todd Veldhuizen, Chichiang Wan, Judy Ward, and Thomas Wikehult. The German reviewers included Ralf Boecker, Dirk Herrmann, Dietmar Kühl, Edda Lörke, Herbert Scheubner, Dominik Strasser, and Martin Weitzel. Additional input was provided by Matt Austern, Valentin Bonnard, Greg Colvin, Beman Dawes, Bill Gibbons, Lois Goldthwaite, Andrew Koenig, Steve Rumsby, Bjarne Stroustrup, and David Vandevoorde.

Special thanks to Dave Abrahams, Janet Cocker, Catherine Ohala, and Maureen Willard who reviewed and edited the whole book very carefully. Their feedback was an incredible contribution to the quality of this book.

A special thanks goes to my “personal living dictionary” — Herb Sutter — the author of the famous “Guru of the Week” (a regular series of C++ programming problems that is published on the `comp.lang.c++.moderated` Internet newsgroup).

I'd also like to thank all the people and companies who gave me the opportunity to test my examples on different platforms with different compilers. Many thanks to Steve Adamczyk, Mike Anderson, and John Spicer from EDG for their great compiler and their support. It was a big help during the standardization process and the writing of this book. Many thanks to P. J. Plauger and Dinkumware, Ltd, for their early standard-conforming implementation of the C++ standard library. Many thanks to Andreas Hommel and Metrowerks for an evaluative version of their CodeWarrior Programming Environment. Many thanks to all the developers of the free GNU and egcs compilers. Many thanks to Microsoft for an evaluative version of Visual C++. Many thanks to Roland Hartinger from Siemens Nixdorf Informations Systems AG for a test version of their C++ compiler. Many thanks to Topjects GmbH for an evaluative version of the ObjectSpace library implementation.

Many thanks to everyone from Addison Wesley Longman who worked with me. Among others this includes Janet Cocker, Mike Hendrickson, Debbie Lafferty, Marina Lang, Chanda Leary, Catherine Ohala, Marty Rabinowitz, Susanne Spitzer, and Maureen Willard. It was fun.

In addition, I'd like to thank the people at BREDEX GmbH and all the people in the C++ community, particularly those involved with the standardization process, for their support and patience (sometimes I ask really silly questions).

Last but not least, many thanks and kisses for my family: Ulli, Lucas, Anica, and Frederic. I definitely did not have enough time for them due to the writing of this book.

Have fun and be human!

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