

[Book] A Tour Of C Bjarne Stroustrup

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A Tour of C++-Bjarne Stroustrup 2013-09-16 The C++11 standard allows programmers to express ideas more clearly, simply, and directly, and to write faster, more efficient code. Bjarne Stroustrup, the designer and original implementer of C++, thoroughly covers the details of this language and its use in his definitive reference, The C++ Programming Language, Fourth Edition. In A Tour of C++ , Stroustrup excerpts the overview chapters from that complete reference, expanding and enhancing them to give an experienced programmer-in just a few hours-a clear idea of what constitutes modern C++. In this concise, self-contained guide, Stroustrup covers most major language features and the major standard-library components-not, of course, in great depth, but to a level that gives programmers a meaningful overview of the language, some key examples, and practical help in getting started. Stroustrup presents the C++ features in the context of the programming styles they support, such as object-oriented and generic programming. His tour is remarkably comprehensive. Coverage begins with the basics, then ranges widely through more advanced topics, including many that are new in C++11, such as move semantics, uniform initialization, lambda expressions, improved containers, random numbers, and concurrency. The tour ends with a discussion of the design and evolution of C++ and the extensions added for C++11. This guide does not aim to teach you how to program (see Stroustrup's Programming: Principles and Practice Using C++ for that); nor will it be the only resource you'll need for C++ mastery (see Stroustrup's The C++ Programming Language, Fourth Edition, for that). If, however, you are a C or C++ programmer wanting greater familiarity with the current C++ language, or a programmer versed in another language wishing to gain an accurate picture of the nature and benefits of modern C++, you can't find a shorter or simpler introduction than this tour provides.

A Tour of C++-Bjarne Stroustrup 2014 Extended and enhanced version of: The C++ programming language, Fourth edition.

A Tour of C++-Bjarne Stroustrup 2018

The Design and Evolution of C++-Bjarne Stroustrup 1994-10-08

Programming-Bjarne Stroustrup 2014 An Introduction to Programming by the Inventor of C++ Preparation for Programming in the Real World The book assumes that you aim eventually to write non-trivial programs, whether for work in software development or in some other technical field. Focus on Fundamental Concepts and Techniques The book explains fundamental concepts and techniques in greater depth than traditional introductions. This approach will give you a solid foundation for writing useful, correct, maintainable, and efficient code. Programming with Today's C++ (C++11 and C++14) The book is an introduction to programming in general, including object-oriented programming and generic programming. It is also a solid introduction to the C++ programming language, one of the most widely used languages for real-world software. The book presents modern C++ programming techniques from the start, introducing the C++ standard library and C++11 and C++14 features to simplify programming tasks. For Beginners--And Anyone Who Wants to Learn Something New The book is primarily designed for people who have never programmed before, and it has been tested with many thousands of first-year university students. It has also been extensively used for self-study. Also, practitioners and advanced students have gained new insight and guidance by seeing how a master approaches the elements of his art. Provides a Broad View The first half of the book covers a wide range of essential concepts, design and programming techniques, language features, and libraries. Those will enable you to write programs involving input, output, computation, and simple graphics. The second half explores more specialized topics (such as text processing, testing, and the C programming language) and provides abundant reference material. Source code and support supplements are available from the author's website.

The C++ Programming Language-Bjarne Stroustrup 2000

C++ In-Depth Box Set-Bjarne Stroustrup 2002-01 Bjarne Stroustrup's own 'C++ In-Depth Series' is available all together in one attractive gift box, at a special reduced price! All books in this series have been hand-picked by Bjarne Stroustrup, the creator of the C++ programming language, as being wort Discovering Modern C++-Peter Gottschling 2015-12-23 As scientific and engineering projects grow larger and more complex, it is increasingly likely that those projects will be written in C++. With embedded hardware growing more powerful, much of its software is moving to C++, too. Mastering C++ gives you strong skills for programming at nearly every level, from "close to the hardware" to the highest-level abstractions. In short, C++ is a language that scientific and technical practitioners need to know. Peter Gottschling's Discovering Modern C++ is an intensive introduction that guides you smoothly to sophisticated approaches based on advanced features. Gottschling introduces key concepts using examples from many technical problem domains, drawing on his extensive experience training professionals and teaching C++ to students of physics, math, and engineering. This book is designed to help you get started rapidly and then master increasingly robust features, from lambdas to expression templates. You'll also learn how to take advantage of the powerful libraries available to C++ programmers: both the Standard Template Library (STL) and scientific libraries for arithmetic, linear algebra, differential equations, and graphs. Throughout, Gottschling demonstrates how to write clear and expressive software using object orientation, generics, metaprogramming, and procedural techniques. By the time you're finished, you'll have mastered all the abstractions you need to write C++ programs with exceptional quality and performance.

C++ Primer Plus-Stephen Prata 2011-10-18 C++ Primer Plus, Sixth Edition New C++11 Coverage C++ Primer Plus is a carefully crafted, complete tutorial on one of the most significant and widely used programming languages today. An accessible and easy-to-use self-study guide, this book is appropriate for both serious students of programming as well as developers already proficient in other languages. The sixth edition of C++ Primer Plus has been updated and expanded to cover the latest developments in C++, including a detailed look at the new C++11 standard. Author and educator Stephen Prata has created an introduction to C++ that is instructive, clear, and insightful. Fundamental programming concepts are explained along with details of the C++ language. Many short, practical examples illustrate just one or two concepts at a time, encouraging readers to master new topics by immediately putting them to use. Review questions and programming exercises at the end of each chapter help readers zero in on the most critical information and digest the most difficult concepts. In C++ Primer Plus, you'll find depth, breadth, and a variety of teaching techniques and tools to enhance your learning: A new detailed chapter on the changes and additional capabilities introduced in the C++11 standard Complete, integrated discussion of both basic C language and additional C++ features Clear guidance about when and why to use a feature Hands-on learning with concise and simple examples that develop your understanding a concept or two at a time Hundreds of practical sample programs Review questions and programming exercises at the end of each chapter to test your understanding Coverage of generic C++ gives you the greatest possible flexibility Teaches the ISO standard, including discussions of templates, the Standard Template Library, the string class, exceptions, RTTI, and namespaces Table of Contents 1: Getting Started with C++ 2: Setting Out to C++ 3: Dealing with Data 4: Compound Types 5: Loops and Relational Expressions 6: Branching Statements and Logical Operators 7: Functions: C++'s Programming Modules 8: Adventures in Functions 9: Memory Models and Namespaces 10: Objects and Classes 11: Working with Classes 12: Classes and Dynamic Memory Allocation 13: Class Inheritance 14: Reusing Code in C++ 15: Friends, Exceptions, and More 16: The string Class and the Standard Template Library 17: Input, Output, and Files 18: The New C++11 Standard A Number Bases B C++ Reserved Words C The ASCII Character Set D Operator Precedence E Other Operators F The stringTemplate Class G The Standard Template Library Methods and Functions H Selected Readings and Internet Resources I Converting to ISO Standard C++ J Answers to Chapter Reviews

Effective C++-Scott Meyers 2005 Presents a collection of tips for programmers on ways to improve programming skills.

Accelerated C++: Practical Programming By Example- 2000-09

Modern C++ Design-Andrei Alexandrescu 2001 Presents a collection of reusable design artifacts, called generic components, together with the techniques that make them possible. The author describes techniques for policy-based design, partial template specialization, typelists, and local classes, then goes on to implement generic components for smart pointers, object factories, functor objects, the Visitor design pattern, and multimethod engines. c. Book News Inc.

C++ FAQs-Marshall P. Cline 1998-12-11 In a concise and direct question-and-answer format, C++ FAQs, Second Edition brings you the most efficient solutions to more than four hundred of the practical programming challenges you face every day. Moderators of the on-line C++ FAQ at comp.lang.c++, Marshall Cline, Greg Lomow, and Mike Girou are familiar with C++ programmers' most pressing concerns. In this book, the authors concentrate on those issues most critical to the professional programmer's work, and they present more explanatory material and examples than is possible on-line. This book focuses on the effective use of C++, helping programmers avoid combining seemingly legal C++ constructs in incompatible ways. This second edition is completely up-to-date with the final ANSI/ISO C++ Standard. It covers some of the smaller syntax changes, such as "mutable"; more significant changes, such as RTTI and namespaces; and such major innovations as the C++ Standard Library, including the STL. In addition, this book discusses technologies such as Java, CORBA, COM/COM+, and ActiveX--and the relationship all of these have with C++. These new features and technologies are iconed to help you quickly find what is new and different in this edition. Each question-and-answer section contains an overview of the problem and solution, fuller explanations of concepts, directions for proper use of language features,

guidelines for best practices and practices to avoid, and plenty of working, stand-alone examples. This edition is thoroughly cross-referenced and indexed for quick access. Get a value-added service! Try out all the examples from this book at www.codesaw.com. CodeSaw is a free online learning tool that allows you to experiment with live code from your book right in your browser.

Masterminds of Programming-Federico Biancuzzi 2009-03-21 Masterminds of Programming features exclusive interviews with the creators of several historic and highly influential programming languages. In this unique collection, you'll learn about the processes that led to specific design decisions, including the goals they had in mind, the trade-offs they had to make, and how their experiences have left an impact on programming today. Masterminds of Programming includes individual interviews with: Adin D. Falkoff: APL Thomas E. Kurtz: BASIC Charles H. Moore: FORTH Robin Milner: ML Donald D. Chamberlin: SQL Alfred Aho, Peter Weinberger, and Brian Kernighan: AWK Charles Geschke and John Warnock: PostScript Bjarne Stroustrup: C++ Bertrand Meyer: Eiffel Brad Cox and Tom Love: Objective-C Larry Wall: Perl Simon Peyton Jones, Paul Hudak, Philip Wadler, and John Hughes: Haskell Guido van Rossum: Python Luiz Henrique de Figueiredo and Roberto Ierusalimsky: Lua James Gosling: Java Grady Booch, Ivar Jacobson, and James Rumbaugh: UML Anders Hejlsberg: Delphi inventor and lead developer of C# If you're interested in the people whose vision and hard work helped shape the computer industry, you'll find Masterminds of Programming fascinating.

C++ Crash Course-Josh Lospinoso 2019-09-24 A fast-paced, thorough introduction to modern C++ written for experienced programmers. After reading C++ Crash Course, you'll be proficient in the core language concepts, the C++ Standard Library, and the Boost Libraries. C++ is one of the most widely used languages for real-world software. In the hands of a knowledgeable programmer, C++ can produce small, efficient, and readable code that any programmer would be proud of. Designed for intermediate to advanced programmers, C++ Crash Course cuts through the weeds to get you straight to the core of C++17, the most modern revision of the ISO standard. Part 1 covers the core of the C++ language, where you'll learn about everything from types and functions, to the object life cycle and expressions. Part 2 introduces you to the C++ Standard Library and Boost Libraries, where you'll learn about all of the high-quality, fully-featured facilities available to you. You'll cover special utility classes, data structures, and algorithms, and learn how to manipulate file systems and build high-performance programs that communicate over networks. You'll learn all the major features of modern C++, including: • Fundamental types, reference types, and user-defined types • The object lifecycle including storage duration, memory management, exceptions, call stacks, and the RAII paradigm • Compile-time polymorphism with templates and run-time polymorphism with virtual classes • Advanced expressions, statements, and functions • Smart pointers, data structures, dates and times, numerics, and probability/statistics facilities • Containers, iterators, strings, and algorithms • Streams and files, concurrency, networking, and application development With well over 500 code samples and nearly 100 exercises, C++ Crash Course is sure to help you build a strong C++ foundation.

C++ Pocket Reference-Kyle Loudon 2008-08-07 C++ is a complex language with many subtle facets. This is especially true when it comes to object-oriented and template programming. The C++ Pocket Reference is a memory aid for C++ programmers, enabling them to quickly look up usage and syntax for unfamiliar and infrequently used aspects of the language. The book's small size makes it easy to carry about, ensuring that it will always be at-hand when needed. Programmers will also appreciate the book's brevity; as much information as possible has been crammed into its small pages.In the C++ Pocket Reference, you will find: Information on C++ types and type conversions Syntax for C++ statements and preprocessor directives Help declaring and defining classes, and managing inheritance Information on declarations, storage classes, arrays, pointers, strings, and expressions Refreshers on key concepts of C++ such as namespaces and scope More! C++ Pocket Reference is useful to Java and C programmers making the transition to C++, or who find themselves occasionally programming in C++. The three languages are often confusingly similar. This book enables programmers familiar with C or Java to quickly come up to speed on how a particular construct or concept is implemented in C++. Together with its companion STL Pocket Reference, the C++ Pocket Reference forms one of the most concise, easily-carried, quick-references to the C++ language available.

Beginning C++17-Ivor Horton 2018-03-24 Learn how to program using the updated C++17 language. You'll start with the basics and progress through step-by-step examples to become a working C++ programmer. All you need are Beginning C++17 and any recent C++ compiler and you'll soon be writing real C++ programs. There is no assumption of prior programming knowledge. All language concepts that are explained in the book are illustrated with working program examples, and all chapters include exercises for you to test and practice your knowledge. Code downloads are provided for all examples from the text and solutions to the exercises. This latest edition has been fully updated to the latest version of the language, C++17, and to all conventions and best practices of so-called modern C++. Beginning C++17 also introduces the elements of the C++ Standard Library that provide essential support for the C++17 language. What You'll Learn Define variables and make decisions Work with arrays and loops, pointers and references, strings, and more Write your own functions, types, and operators Discover the essentials of object-oriented programming Use overloading, inheritance, virtual functions and polymorphism Write generic function templates and class templates Get up to date with modern C++ features: auto type declarations, move semantics, lambda expressions, and more Examine the new additions to C++17 Who This Book Is For Programmers new to C++ and those who may be looking for a refresh primer on the C++17 programming language in general.

Absolute C++-Walter Savitch 2015-03-04 NOTE: You are purchasing a standalone product; MyProgrammingLab does not come packaged with this content If you would like to purchase MyProgrammingLab search for ISBN-10:0134225392 /ISBN-13: 9780134225395. That package includes ISBN-10: 0133970787 /ISBN-13: 9780133970784 and ISBN-10: 0134254007 /ISBN-13: 9780134254005. Introduction and Advancement in C++ Programming Absolute C++ is a comprehensive introduction to the C++ programming language. The text is organized around the specific use of C++, providing programmers with an opportunity to master the language completely. Adaptable to a wide range of users, the text is appropriate for beginner to advanced programmers familiar with the C++ language. The Sixth Edition covers everything from basic syntax to more advanced topics, such as polymorphism, exception handling, and the Standard Template Library, making it ideal for both beginner and intermediate programmers. Updated to reflect the most recent changes in the C++ language, Absolute C++ teaches readers to become proficient in a widely used and important programming language. Also Available with MyProgrammingLab (tm) This title is also available with MyProgrammingLab -- an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Students, if interested in purchasing this title with MyProgrammingLab, ask your instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative for more information.

Beginning C++ Game Programming-John Horton 2016-10-07 Learn C++ from scratch and get started building your very own games About This Book This book offers a fun way to learn modern C++ programming while building exciting 2D games This beginner-friendly guide offers a fast-paced but engaging approach to game development Dive headfirst into building a wide variety of desktop games that gradually increase in complexity It is packed with many suggestions to expand your finished games that will make you think critically, technically, and creatively Who This Book Is For This book is perfect for you if any of the following describes you: You have no C++ programming knowledge whatsoever or need a beginner level refresher course, if you want to learn to build games or just use games as an engaging way to learn C++, if you have aspirations to publish a game one day, perhaps on Steam, or if you just want to have loads of fun and impress friends with your creations. What You Will Learn Get to know C++ from scratch while simultaneously learning game building Learn the basics of C++, such as variables, loops, and functions to animate game objects, respond to collisions, keep score, play sound effects, and build your first playable game. Use more advanced C++ topics such as classes, inheritance, and references to spawn and control thousands of enemies, shoot with a rapid fire machine gun, and realize random scrolling game-worlds Stretch your C++ knowledge beyond the beginner level and use concepts such as pointers, references, and the Standard Template Library to add features like split-screen coop, immersive directional sound, and custom levels loaded from level-design files Get ready to go and build your own unique games! In Detail This book is all about offering you a fun introduction to the world of game programming, C++, and the OpenGL-powered SFML using three fun, fully-playable games. These games are an addictive frantic two-button tapper, a multi-level zombie survival shooter, and a split-screen multiplayer puzzle-platformer. We will start with the very basics of programming, such as variables, loops, and conditions and you will become more skillful with each game as you move through the key C++ topics, such as OOP (Object-Orientated Programming), C++ pointers, and an introduction to the Standard Template Library. While building these games, you will also learn exciting game programming concepts like particle effects, directional sound (spatialization), OpenGL programmable Shaders, spawning thousands of objects, and more. Style and approach This book offers a fun, example-driven approach to learning game development and C++. In addition to explaining game development techniques in an engaging style, the games are built in a way that introduces the key C++ topics in a practical and not theory-based way, with multiple runnable/playable stages in each chapter.

Mastering C++-Herbert Schildt 1993-01

Becoming a Better Programmer-Pete Goodliffe 2014-10-03 If you're passionate about programming and want to

get better at it, you've come to the right source. Code Craft author Pete Goodliffe presents a collection of useful techniques and approaches to the art and craft of programming that will help boost your career and your well-being. Goodliffe presents sound advice that he's learned in 15 years of professional programming. The book's standalone chapters span the range of a software developer's life—dealing with code, learning the trade, and improving performance—with no language or industry bias. Whether you're a seasoned developer, a neophyte professional, or a hobbyist, you'll find valuable tips in five independent categories: Code-level techniques for crafting lines of code, testing, debugging, and coping with complexity Practices, approaches, and attitudes: keep it simple, collaborate well, reuse, and create malleable code Tactics for learning effectively, behaving ethically, finding challenges, and avoiding stagnation Practical ways to complete things: use the right tools, know what "done" looks like, and seek help from colleagues Habits for working well with others, and pursuing development as a social activity

The C++ Programming Language-Bjarne Stroustrup 2013-07-10 The new C++11 standard allows programmers to express ideas more clearly, simply, and directly, and to write faster, more efficient code. Bjarne Stroustrup, the designer and original implementer of C++, has reorganized, extended, and completely rewritten his definitive reference and tutorial for programmers who want to use C++ most effectively. The C++ Programming Language, Fourth Edition, delivers meticulous, richly explained, and integrated coverage of the entire language—its facilities, abstraction mechanisms, standard libraries, and key design techniques. Throughout, Stroustrup presents concise, "pure C++11" examples, which have been carefully crafted to clarify both usage and program design. To promote deeper understanding, the author provides extensive cross-references, both within the book and to the ISO standard. New C++11 coverage includes Support for concurrency Regular expressions, resource management pointers, random numbers, and improved containers General and uniform initialization, simplified for-statements, move semantics, and Unicode support Lambdas, general constant expressions, control over class defaults, variadic templates, template aliases, and user-defined literals Compatibility issues Topics addressed in this comprehensive book include Basic facilities: type, object, scope, storage, computation fundamentals, and more Modularity, as supported by namespaces, source files, and exception handling C++ abstraction, including classes, class hierarchies, and templates in support of a synthesis of traditional programming, object-oriented programming, and generic programming Standard Library: containers, algorithms, iterators, utilities, strings, stream I/O, locales, numerics, and more The C++ basic memory model, in depth This fourth edition makes C++11 thoroughly accessible to programmers moving from C++98 or other languages, while introducing insights and techniques that even cutting-edge C++11 programmers will find indispensable. This book features an enhanced, layflat binding, which allows the book to stay open more easily when placed on a flat surface. This special binding method—noticeable by a small space inside the spine—also increases durability.

C++ Network Programming, Volume I-Douglas Schmidt 2001-12-10 As networks, devices, and systems continue to evolve, software engineers face the unique challenge of creating reliable distributed applications within frequently changing environments. C++ Network Programming, Volume 1, provides practical solutions for developing and optimizing complex distributed systems using the ADAPTIVE Communication Environment (ACE), a revolutionary open-source framework that runs on dozens of hardware platforms and operating systems. This book guides software professionals through the traps and pitfalls of developing efficient, portable, and flexible networked applications. It explores the inherent design complexities of concurrent networked applications and the tradeoffs that must be considered when working to master them. C++ Network Programming begins with an overview of the issues and tools involved in writing distributed concurrent applications. The book then provides the essential design dimensions, patterns, and principles needed to develop flexible and efficient concurrent networked applications. The book's expert author team shows you how to enhance design skills while applying C++ and patterns effectively to develop object-oriented networked applications. Readers will find coverage of: C++ network programming, including an overview and strategies for addressing common development challenges The ACE Toolkit Connection protocols, message exchange, and message-passing versus shared memory Implementation methods for reusable networked application services Concurrency in object-oriented network programming Design principles and patterns for ACE wrapper facades With this book, C++ developers have at their disposal the most complete toolkit available for developing successful, multiplatform, concurrent networked applications with ease and efficiency.

C++ Programming in Easy Steps-Mike McGrath 2003-08-27 C++ Programming in easy steps instructs the reader how to program in C++ both on Windows platforms and on Unix-based platforms, such as Linux. It contains separate chapters on the major features of the C++ language. There are complete example programs that illustrate each aspect of C++. C++ Programming in easy steps begins by explaining how to download and install a free C++ compiler so that the reader can quickly begin to create their own executable programs by copying the book's examples. This book makes no assumption that the reader will have previous knowledge of any programming language so it's ideal for the newcomer to computer programming. Each chapter builds the reader's knowledge of C++. By the end of this book the reader will have gained a sound understanding of the C++ language and be able to write their own C++ programs and compile them into executable files that can be run on any compatible computer. · Introducing C++ · Storing Data · Performing Operations · Making Statements · Working with strings · Reading and writing files · Using Functions · Creating Classes and Objects · Pointing to Data · Referencing Data · Inheriting Features · Harnessing Polymorphism · Processing Macros · Handling Exceptions · Moving On

The Annotated C++ Reference Manual-Ellis 2007-02

Large-Scale C++ Volume I-John Lakos 2019-12-02 Writing reliable and maintainable C++ software is hard. Designing such software at scale adds a new set of challenges. Creating large-scale systems requires a practical understanding of logical design - beyond the theoretical concepts addressed in most popular texts. To be successful on an enterprise scale, developers must also address physical design, a dimension of software engineering that may be unfamiliar even to expert developers. Drawing on over 30 years of hands-on experience building massive, mission-critical enterprise systems, John Lakos shows how to create and grow Software Capital. This groundbreaking volume lays the foundation for projects of all sizes and demonstrates the processes, methods, techniques, and tools needed for successful real-world, large-scale development. Up to date and with a solid engineering focus, Large-Scale C++, Volume I: Process and Architecture, demonstrates fundamental design concepts with concrete examples. Professional developers of all experience levels will gain insights that transform their approach to design and development by understanding how to Raise productivity by leveraging differences between infrastructure and application development Achieve exponential productivity gains through feedback and hierarchical reuse Embrace the component's role as the fundamental unit of both logical and physical design Analyze how fundamental properties of compiling and linking affect component design Discover effective partitioning of logical content in appropriately sized physical aggregates Internalize the important differences among sufficient, complete, minimal, and primitive software Deliver solutions that simultaneously optimize encapsulation, stability, and performance Exploit the nine established levelization techniques to avoid cyclic physical dependencies Use lateral designs judiciously to avoid the "heaviness" of conventional layered architectures Employ appropriate architectural insulation techniques for eliminating compile-time coupling Master the multidimensional process of designing large systems using component-based methods This is the first of John Lakos's three authoritative volumes on developing large-scale systems using C++. This book, written for fellow software practitioners, uses familiar C++ constructs to solve real-world problems while identifying (and motivating) modern C++ alternatives. Together with the forthcoming Volume II: Design and Implementation and Volume III: Verification and Testing, Large-Scale C++ offers comprehensive guidance for all aspects of large-scale C++ software development. If you are an architect or project leader, this book will empower you to solve critically important problems right now - and serve as your go-to reference for years to come. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Modern C++ Programming Cookbook-Marius Bancila 2017-05-15 Over 100 recipes to help you overcome your difficulties with C++ programming and gain a deeper understanding of the working of modern C++ About This Book Explore the most important language and library features of C++17, including containers, algorithms, regular expressions, threads, and more, Get going with unit testing frameworks Boost.Test, Google Test and Catch, Extend your C++ knowledge and take your development skills to new heights by making your applications fast, robust, and scalable. Who This Book Is For If you want to overcome difficult phases of development with C++ and leverage its features using modern programming practices, then this book is for you. The book is designed for both experienced C++ programmers as well as people with strong knowledge of OOP concepts. What You Will Learn Get to know about the new core language features and the problems they were intended to solve Understand the standard support for threading and concurrency and know how to put them on work for daily basic tasks Leverage C++'s features to get increased robustness and performance Explore the widely-used testing frameworks for C++ and implement various useful patterns and idioms Work with various types of strings and look at the various aspects of compilation Explore functions and callable objects with a focus on modern features Leverage the standard library and work with containers, algorithms, and iterators Use regular expressions for find and replace string operations Take advantage of the new filesystem library to work with files and directories Use the new utility additions to the standard library to solve common problems developers encounter including string_view, any, optional and variant types In Detail C++ is one of the most widely used programming languages. Fast, efficient, and flexible, it is used to solve many problems. The latest versions of C++ have seen programmers change the way they code, giving up on the old-fashioned C-style programming and adopting modern C++ instead. Beginning with the modern language features, each recipe addresses a specific problem, with a discussion that explains the solution and offers insight into how it works. You will learn major concepts about the core programming language as well as common tasks faced while building a wide variety of software. You will learn about concepts such as concurrency, performance, meta-programming, lambda expressions, regular expressions, testing, and many more in the form of recipes. These recipes will ensure you can make your applications robust and fast. By the end of the book, you will understand the newer aspects of C++11/14/17 and will be able to overcome tasks that are time-consuming or would break your stride while developing. Style and approach This book follows a recipe-based approach, with examples that will empower you to implement the core programming language features and explore the newer aspects of C++.

Elements of Programming-Alexander Stepanov

Sams Teach Yourself C++ in 24 Hours-Jesse Liberty 2011-04-11 Starter Kit Includes C++ compiler and IDE for Windows, Mac & Linux In just 24 lessons of one hour or less, you can learn the basics of programming with C++-one of the most popular and powerful programming languages ever created. Using a straightforward, step-by-step approach, this fast and friendly tutorial teaches you everything you need to know, from installing and using a compiler, to debugging the programs you've created, to what's coming in C++0x, the next version of C++. Each lesson builds on what you've already learned, giving you a solid understanding of the basics of C++ programming concepts and techniques. Step-by-step instructions carefully walk you through the most common C++ programming tasks Quizzes and Exercises at the end of each chapter help you test yourself to make sure you're ready to go on Starter Kit software provides everything you need to create and compile C++ programs on any platform-Windows, Mac or Linux Learn how to... Install and use a C++ compiler for Windows, Mac OS X or Linux Build object-oriented programs in C++ Master core C++ concepts such as functions, classes, arrays, and pointers Add rich functionality with linked lists and templates Debug your programs for flawless code Learn exception and error-handling techniques Discover what's new in C++0x, the next version of C++ Jesse Liberty is the author of numerous books on software development, including best selling titles on C++ and .NET. He is the president of Liberty Associates, Inc. where he provides custom programming, consulting, and training. Rogers Cadenhead is a web application developer who has written many books on Internet-related topics, including Teach Yourself Java in 24 Hours. He maintains this book's official website at <http://cplusplus.cadenhead.org>. CD-ROM Includes C++ compiler Visual development environment for Windows, Mac and Linux Source code for the book's examples Register your book at informat.com/register for convenient access to updates and corrections as they become available.

C++ Concurrency in Action-Anthony Williams 2019 C++ Concurrency in Action, Second Edition is the definitive guide to writing elegant multithreaded applications in C++. Updated for C++ 17, it carefully addresses every aspect of concurrent development, from starting new threads to designing fully functional multithreaded algorithms and data structures. Concurrency master Anthony Williams presents examples and practical tasks in every chapter, including insights that will delight even the most experienced developer. -- Provided by publisher. Expert C++-Vardan Grigoryan 2020-04-10 Design and architect real-world scalable C++ applications by exploring advanced techniques in low-level programming, object-oriented programming (OOP), the Standard Template Library (STL), metaprogramming, and concurrency Key Features Design professional-grade, maintainable apps by learning advanced concepts such as functional programming, templates, and networking Apply design patterns and best practices to solve real-world problems Improve the performance of your projects by designing concurrent data structures and algorithms Book Description C++ has evolved over the years and the latest release - C++20 - is now available. Since C++11, C++ has been constantly enhancing the language feature set. With the new version, you'll explore an array of features such as concepts, modules, ranges, and coroutines. This book will be your guide to learning the intricacies of the language, techniques, C++ tools, and the new features introduced in C++20, while also helping you apply these when building modern and resilient software. You'll start by exploring the latest features of C++, and then move on to advanced techniques such as multithreading, concurrency, debugging, monitoring, and high-performance programming. The book will delve into object-oriented programming principles and the C++ Standard Template Library, and even show you how to create custom templates. After this, you'll learn about different approaches such as test-driven development (TDD), behavior-driven development (BDD), and domain-driven design (DDD), before taking a look at the coding best practices and design patterns essential for building professional-grade applications. Toward the end of the book, you will gain useful insights into the recent C++ advancements in AI and machine learning. By the end of this C++ programming book, you'll have gained expertise in real-world application development, including the process of designing complex software. What you will learn Understand memory management and low-level programming in C++ to write secure and stable applications Discover the latest C++20 features such as modules, concepts, ranges, and coroutines Understand debugging and testing techniques and reduce issues in your programs Design and implement GUI applications using Qt5 Use multithreading and concurrency to make your programs run faster Develop high-end games by using the object-oriented capabilities of C++ Explore AI and machine learning concepts with C++ Who this book is for This C++ book is for experienced C++ developers who are looking to take their knowledge to the next level and perfect their skills in building professional-grade applications.

More Effective C++-Scott Meyers 1995-12-29 More than 150,000 copies in print! Praise for Scott Meyers' first book, Effective C++: "I heartily recommend Effective C++ to anyone who aspires to mastery of C++ at the intermediate level or above." - The C/C++ User's Journal From the author of the indispensable Effective C++, here are 35 new ways to improve your programs and designs. Drawing on years of experience, Meyers explains how to write software that is more effective: more efficient, more robust, more consistent, more portable, and more reusable. In short, how to write C++ software that's just plain better. More Effective C++ includes: Proven methods for improving program efficiency, including incisive examinations of the time/space costs of C++ language features Comprehensive descriptions of advanced techniques used by C++ experts, including placement new, virtual constructors, smart pointers, reference counting, proxy classes, and double-dispatching Examples of the profound impact of exception handling on the structure and behavior of C++ classes and functions Practical treatments of new language features, including bool, mutable, explicit, namespaces, member templates, the Standard Template Library, and more. If your compilers don't yet support these features, Meyers shows you how to get the job done without them. More Effective C++ is filled with pragmatic, down-to-earth advice you'll use every day. Like Effective C++ before it, More Effective C++ is essential reading for anyone working with C++. C++ Coding Standards-Herb Sutter 2004-10-25 Consistent, high-quality coding standards improve software quality, reduce time-to-market, promote teamwork, eliminate time wasted on inconsequential matters, and simplify maintenance. Now, two of the world's most respected C++ experts distill the rich collective experience of the global C++ community into a set of coding standards that every developer and development team can understand and use as a basis for their own coding standards. The authors cover virtually every facet of C++ programming: design and coding style, functions, operators, class design, inheritance, construction/destruction, copying, assignment, namespaces, modules, templates, genericity, exceptions, STL containers and algorithms, and more. Each standard is described concisely, with practical examples. From type definition to error handling, this book presents C++ best practices, including some that have only recently been identified and standardized-techniques you may not know even if you've used C++ for years. Along the way, you'll find answers to questions like What's worth standardizing--and what isn't? What are the best ways to code for scalability? What are the elements of a rational error handling policy? How (and why) do you avoid unnecessary initialization, cyclic, and definitional dependencies? When (and how) should you use static and dynamic polymorphism together? How do you practice "safe" overriding? When should you provide a no-fail swap? Why and how should you prevent exceptions from propagating across module boundaries? Why shouldn't you write namespace declarations or directives in a header file? Why should you use STL vector and string instead of arrays? How do you choose the right STL search or sort algorithm? What rules should you follow to ensure type-safe code? Whether you're working alone or with others, C++ Coding Standards will help you write cleaner code--and write it faster, with fewer hassles and less frustration.

The ACE Programmer's Guide-Stephen D. Huston 2010-05-15 The ADAPTIVE Communication Environment (ACE) is an open-source software toolkit created to solve network programming challenges. Written in C++, with the help of 30 core developers and 1,700 contributors, this portable middleware has evolved to encapsulate and augment a wide range of native OS capabilities essential to support performance-driven software systems. The ACE Programmer's Guide is a practical, hands-on guide to ACE for C++ programmers building networked applications and next-generation middleware. The book first introduces ACE to beginners. It then explains how you can tap design patterns, frameworks, and ACE to produce effective, easily maintained software systems with less time and effort. The book features discussions of programming aids, interprocess communication (IPC) issues, process and thread management, shared memory, the ACE Service Configurator framework, timer management classes, the ACE Naming Service, and more.

Developing C++ Software-Russel Winder 1993 Designed for those who must learn to produce robust, quality software written in the C++ language, this text adopts a problem-solving approach. The edition has been revised to introduce the concept of templates, as well as extra features that alter the possible programming styles used. C++ Solutions-David Vandevoorde 1998 Developers acquire a thorough understanding of ANSI/ISO C++ by working through examples. Vandevoorde solves a broad subset of illustrative and realistic exercises to facilitate this process. He also includes hints to help programmers find their own solutions, and additional exercises to provide deeper insights into modern software design. Highlights In-depth coverage of C++ language concepts, syntax, and features for each chapter Numerous detailed examples that build intuition about performance issues Adherence to the final ANSI/ISO C++ specifications Sample code and programs available on-line 0201309653B04062001

The C++ Programming Language 5th Edition-Procody Publishing 2019-09-05 C++ Programming for Beginners! Have you always wanted to learn c programming but are afraid it'll be too difficult for you? Or perhaps you know other programming languages but are interested in learning the C++ programming language fast? This book is for you. You no longer have to waste your time and money learning C++ programming from boring books that are 600 pages long, expensive online courses or complicated C++ programming tutorials that just leave you more confused. What this book offers... C++ for Beginners Complex concepts are broken down into simple steps to ensure that you can easily master the C++ Programming language even if you have never coded before. Carefully Chosen C++ Programming Examples Examples are carefully chosen to illustrate all concepts. In addition, the output for all examples are provided immediately so you do not have to wait till you have access to your computer to test the examples. Careful selection of topics Topics are carefully selected to give you a broad exposure to C, while not overwhelming you with information overload. These topics include object-oriented programming concepts, error handling techniques, file handling techniques and more. Learn The C++ Programming Language Fast Concepts are presented in a "to-the-point" style to cater to the busy individual. With this book, you can learn C++ in just one day and start coding immediately. How is this book different... The best way to learn C++ programming is by doing. This book includes a unique examples. Working through the examples will not only give

you an immense sense of achievement, it'll also help you retain the knowledge and master the language. Are you ready to dip your toes into the exciting world of C++ coding? This book is for you. Click the BUY button and download it now. What you will learn in this book: *introduction to c++ *environment setup *program structure *basic syntax *data types *variables *operators *decision making *loops *arrays *much,much,more! Download your C++ Programming copy today Tags: ----- C++ Programming, C++ programming tutorial, C++ programming book, learning C++ programming, C++ programming language, C++ coding, C++ programming for beginners, C++ for Dummies

Inventing the Internet-Janet Abbate 2000-07-24 Janet Abbate recounts the key players and technologies that allowed the Internet to develop; but her main focus is always on the social and cultural factors that influenced the Internet's design and use. Since the late 1960s the Internet has grown from a single experimental network serving a dozen sites in the United States to a network of networks linking millions of computers worldwide. In Inventing the Internet, Janet Abbate recounts the key players and technologies that allowed the Internet to develop; but her main focus is always on the social and cultural factors that influenced the Internet's design and use. The story she unfolds is an often twisting tale of collaboration and conflict among a remarkable variety of players, including government and military agencies, computer scientists in academia and industry, graduate students, telecommunications companies, standards organizations, and network users. The story starts with the early networking breakthroughs formulated in Cold War think tanks and realized in the Defense Department's creation of the ARPANET. It ends with the emergence of the Internet and its rapid and seemingly chaotic growth. Abbate looks at how academic and military influences and attitudes shaped both networks; how the usual lines between producer and user of a technology were crossed with interesting and unique results; and how later users invented their own very successful applications, such as electronic mail and the World Wide Web. She concludes

that such applications continue the trend of decentralized, user-driven development that has characterized the Internet's entire history and that the key to the Internet's success has been a commitment to flexibility and diversity, both in technical design and in organizational culture.

Advanced Metaprogramming in Classic C++-Davide Di Gennaro 2015-05-08 Advanced Metaprogramming in Classic C++ aims to be both an introduction and a reference to C++ template metaprogramming (TMP); TMP is presented in the book as a set of techniques that will bring a new style in C++ and make code exceptionally clear and efficient. The book deals with language aspects, design patterns, examples and applications (seen as case studies). Special emphasis is put on small reusable techniques that will improve the quality of daily work. What makes the book exceptional is the level of understanding of the concepts involved imparted by the author. This is not just a rote overview of metaprogramming. You will truly understand difficult topics like static assertions, how to write metafunctions, overload resolution, lambda expressions, and many others. More than that, you will work through them with practical examples guided by the author's frank explanations. This book requires you to think and to learn and to understand the language so that you can program at a higher level.

Sams Teach Yourself Beginning Programming in 24 Hours-Greg M. Perry 2002 Sams Teach Yourself Beginning Programming in 24 Hours, Second Edition explains the basics of programming in the successful 24-Hours format. The book begins with the absolute basics of programming: Why program? What tools to use? How does a program tell the computer what to do? It teaches readers how to program the computer and then moves on by exploring the some most popular programming languages in use. The author starts by introducing the reader to the Basic language and finishes with basic programming techniques for Java, C++, and others.