

C Interfaces And Implementations Techniques For Creating Reusable Software

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Designing Interfaces - Jenifer Tidwell

2005-11-21

Provides information on designing easy-to-use interfaces.

User Interfaces for All - Constantine

Stephanidis 2000-11-01

User Interfaces for All is the first book dedicated to the issues of Universal Design and Universal Access in the field of Human-Computer Interaction (HCI). Universal Design (or Design for All) is an inclusive and proactive approach seeking to accommodate diversity in the users and usage contexts of interactive products, applications, and se

Advanced C Programming by Example - John

W. Perry 1998-01-01

Effective Kotlin - Marcin Moskała

Kotlin is a powerful and pragmatic language, but it's not enough to know about its features. We also need to know when they should be used and in what way. This book is a guide for Kotlin

developers on how to become excellent Kotlin developers. It presents and explains in-depth the best practices for Kotlin development. Each item is presented as a clear rule of thumb, supported by detailed explanations and practical examples. *Modern Compiler Implementation in C* - Andrew W. Appel 2004-07-08

This new, expanded textbook describes all phases of a modern compiler: lexical analysis, parsing, abstract syntax, semantic actions, intermediate representations, instruction selection via tree matching, dataflow analysis, graph-coloring register allocation, and runtime systems. It includes good coverage of current techniques in code generation and register allocation, as well as functional and object-oriented languages, that are missing from most books. In addition, more advanced chapters are now included so that it can be used as the basis for a two-semester or graduate course. The most accepted and successful techniques are described in a concise way, rather than as an

exhaustive catalog of every possible variant. Detailed descriptions of the interfaces between modules of a compiler are illustrated with actual C header files. The first part of the book, *Fundamentals of Compilation*, is suitable for a one-semester first course in compiler design. The second part, *Advanced Topics*, which includes the advanced chapters, covers the compilation of object-oriented and functional languages, garbage collection, loop optimizations, SSA form, loop scheduling, and optimization for cache-memory hierarchies.

Programming with C++20 - Andreas Fertig
2021-11-26

Programming with C++20 teaches programmers with C++ experience the new features of C++20 and how to apply them. It does so by assuming C++11 knowledge. Elements of the standards between C++11 and C++20 will be briefly introduced, if necessary. However, the focus is on teaching the features of C++20. You will start with learning about the so-called big four

Concepts, Coroutines, `std::ranges`, and modules. The big four are followed by smaller yet not less important features. You will learn about `std::format`, the new way to format a string in C++. In chapter 6, you will learn about a new operator, the so-called spaceship operator, which makes you write less code. You then will look at various improvements of the language, ensuring more consistency and reducing surprises. You will learn how lambdas improved in C++20 and what new elements you can now pass as non-type template parameters. Your next stop is the improvements to the STL. Of course, you will not end this book without learning about what happened in the `constexpr`-world.

Java by Comparison - Simon Harrer 2018-04
Write code that's clean, concise, and to the point: code that others will read with pleasure and reuse. Comparing your code to that of expert programmers is a great way to improve your coding skills. Get hands-on advice to level up your coding style through small and

understandable examples that compare flawed code to an improved solution. Discover handy tips and tricks, as well as common bugs an experienced Java programmer needs to know. Make your way from a Java novice to a master craftsman. This book is a useful companion for anyone learning to write clean Java code. The authors introduce you to the fundamentals of becoming a software craftsman, by comparing pieces of problematic code with an improved version, to help you to develop a sense for clean code. This unique before-and-after approach teaches you to create clean Java code. Learn to keep your booleans in check, dodge formatting bugs, get rid of magic numbers, and use the right style of iteration. Write informative comments when needed, but avoid them when they are not. Improve the understandability of your code for others by following conventions and naming your objects accurately. Make your programs more robust with intelligent exception handling and learn to assert that everything

works as expected using JUnit5 as your testing framework. Impress your peers with an elegant functional programming style and clear-cut object-oriented class design. Writing excellent code isn't just about implementing the functionality. It's about the small important details that make your code more readable, maintainable, flexible, robust, and faster. Java by Comparison teaches you to spot these details and trains you to become a better programmer. What You Need: You need a Java 8 compiler, a text editor, and a fresh mind. That's it.

C Interfaces and Implementations - David R. Hanson 1997

C Interfaces and Implementations describes how to use interface-based design in the C programming language, and it illustrates this approach by describing 24 interfaces and their implementations in detail. The source code in the book is interleaved with its explanation in an order that best suits understanding the code.

[Programming in Lua](#) - Roberto Ierusalimschy

2006

Authored by Roberto Ierusalimschy, the chief architect of the language, this volume covers all aspects of Lua 5---from the basics to its API with C---explaining how to make good use of its features and giving numerous code examples.

(Computer Books)

[A Retargetable C Compiler](#) - Christopher W. Fraser 1995

This book brings a unique treatment of compiler design to the professional who seeks an in-depth examination of a real-world compiler. Chris Fraser of AT &T Bell Laboratories and David Hanson of Princeton University codeveloped lcc, the retargetable ANSI C compiler that is the focus of this book. They provide complete source code for lcc; a target-independent front end and three target-dependent back ends are packaged as a single program designed to run on three different platforms. Rather than transfer code into a text file, the book and the compiler itself are generated from a single source to ensure

accuracy.

Learn C the Hard Way - Zed A. Shaw

2015-08-10

You Will Learn C! Zed Shaw has crafted the perfect course for the beginning C programmer eager to advance their skills in any language. Follow it and you will learn the many skills early and junior programmers need to succeed--just like the hundreds of thousands of programmers Zed has taught to date! You bring discipline, commitment, persistence, and experience with any programming language; the author supplies everything else. In *Learn C the Hard Way*, you'll learn C by working through 52 brilliantly crafted exercises. Watch Zed Shaw's teaching video and read the exercise. Type his code precisely. (No copying and pasting!) Fix your mistakes. Watch the programs run. As you do, you'll learn what good, modern C programs look like; how to think more effectively about code; and how to find and fix mistakes far more efficiently. Most importantly, you'll master rigorous defensive

programming techniques, so you can use any language to create software that protects itself from malicious activity and defects. Through practical projects you'll apply what you learn to build confidence in your new skills. Shaw teaches the key skills you need to start writing excellent C software, including Setting up a C environment Basic syntax and idioms Compilation, make files, and linkers Operators, variables, and data types Program control Arrays and strings Functions, pointers, and structs Memory allocation I/O and files Libraries Data structures, including linked lists, sort, and search Stacks and queues Debugging, defensive coding, and automated testing Fixing stack overflows, illegal memory access, and more Breaking and hacking your own C code It'll Be Hard at First. But Soon, You'll Just Get It-And That Will Feel Great! This tutorial will reward you for every minute you put into it. Soon, you'll know one of the world's most powerful programming languages. You'll be a C

programmer.

The C Programming Language - Brian W. Kernighan 1988

Introduces the features of the C programming language, discusses data types, variables, operators, control flow, functions, pointers, arrays, and structures, and looks at the UNIX system interface

Learning Carbon - Apple Computer Inc 2001

Provides a thorough grounding in the basics of Carbo, an Application Program Interface for Macintosh programmers to help them write diverse applications for Mac OS X, offering valuable advice on how to put together a Carbon program to organize application resources and handle such tasks as printing, opening and saving files, and furnishing help to users. Original. (Intermediate/Advanced)

21st Century C - Ben Klemens 2012-10-15

Throw out your old ideas about C and get to know a programming language that's substantially outgrown its origins. With this

revised edition of 21st Century C, you'll discover up-to-date techniques missing from other C tutorials, whether you're new to the language or just getting reacquainted. C isn't just the foundation of modern programming languages; it is a modern language, ideal for writing efficient, state-of-the-art applications. Get past idioms that made sense on mainframes and learn the tools you need to work with this evolved and aggressively simple language. No matter what programming language you currently favor, you'll quickly see that 21st century C rocks. Set up a C programming environment with shell facilities, makefiles, text editors, debuggers, and memory checkers Use Autotools, C's de facto cross-platform package manager Learn about the problematic C concepts too useful to discard Solve C's string-building problems with C-standard functions Use modern syntactic features for functions that take structured inputs Build high-level, object-based libraries and programs Perform advanced math, talk to

internet servers, and run databases with existing C libraries This edition also includes new material on concurrent threads, virtual tables, C99 numeric types, and other features.

Expert C Programming - Peter Van der Linden
1994

Software -- Programming Languages.

Data Structures and Algorithms in Java - Michael T. Goodrich 2014-01-28

The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single

Java package, `net.datastructures`. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

Interfacing with C - Howard Hutchings
2000-12-14

Interfacing with C is about interfacing personal computers using C. Anyone who is interested in ports, transducer interfacing, analog to digital conversion, convolution, filters or digital/analog conversion will benefit from reading Interfacing with C. Students will also find this a practical introduction to real-time programming with a generous collection of tried and tested programs. The pace of the book is such that the reader is encouraged to run the programs and experiment with C. The principles precede the applications in most cases in an attempt to provide genuine understanding and encourage further development. Readers will gain much

from the hands-on experience the authors' approach provides, an approach designed to enable readers to climb steep learning curves with the minimum amount of assistance. The many programs included in the text provide the essential hands-on experience. Some of the programs inevitably become rather lengthy, so the source code used is available as a free download from the Newnes website. The aim of the book, however, is to give the reader enough confidence to rewrite and improve these programs. In the second edition Mike James has thoroughly updated all aspects relating to software, operating systems and graphical interfaces. He has also increased the scope of the book to include current forms of C++. Material on data acquisition has been thoroughly updated and the section on peripherals increased. A disk containing the source code for the listings in the book is available from 'Electronics World' magazine, tel. 020 8722 6054. A practical and painless way of becoming

an expert C programmer New edition also covers C++ and the Windows environment Get up to speed with the essential maths needed for C without having to buy a university maths text!

Data Structures and Algorithm Analysis in C++, Third Edition - Clifford A. Shaffer

2012-07-26

Comprehensive treatment focuses on creation of efficient data structures and algorithms and selection or design of data structure best suited to specific problems. This edition uses C++ as the programming language.

Advanced R - Hadley Wickham 2015-09-15

An Essential Reference for Intermediate and Advanced R Programmers Advanced R presents useful tools and techniques for attacking many types of R programming problems, helping you avoid mistakes and dead ends. With more than ten years of experience programming in R, the author illustrates the elegance, beauty, and flexibility at the heart of R. The book develops the necessary skills to produce quality code that

can be used in a variety of circumstances. You will learn: The fundamentals of R, including standard data types and functions Functional programming as a useful framework for solving wide classes of problems The positives and negatives of metaprogramming How to write fast, memory-efficient code This book not only helps current R users become R programmers but also shows existing programmers what's special about R. Intermediate R programmers can dive deeper into R and learn new strategies for solving diverse problems while programmers from other languages can learn the details of R and understand why R works the way it does.

API Design for C++ - Martin Reddy 2011-03-14

API Design for C++ provides a comprehensive discussion of Application Programming Interface (API) development, from initial design through implementation, testing, documentation, release, versioning, maintenance, and deprecation. It is the only book that teaches the strategies of C++ API development, including interface design,

versioning, scripting, and plug-in extensibility. Drawing from the author's experience on large scale, collaborative software projects, the text offers practical techniques of API design that produce robust code for the long term. It presents patterns and practices that provide real value to individual developers as well as organizations. API Design for C++ explores often overlooked issues, both technical and non-technical, contributing to successful design decisions that product high quality, robust, and long-lived APIs. It focuses on various API styles and patterns that will allow you to produce elegant and durable libraries. A discussion on testing strategies concentrates on automated API testing techniques rather than attempting to include end-user application testing techniques such as GUI testing, system testing, or manual testing. Each concept is illustrated with extensive C++ code examples, and fully functional examples and working source code for experimentation are available online. This book

will be helpful to new programmers who understand the fundamentals of C++ and who want to advance their design skills, as well as to senior engineers and software architects seeking to gain new expertise to complement their existing talents. Three specific groups of readers are targeted: practicing software engineers and architects, technical managers, and students and educators. The only book that teaches the strategies of C++ API development, including design, versioning, documentation, testing, scripting, and extensibility. Extensive code examples illustrate each concept, with fully functional examples and working source code for experimentation available online. Covers various API styles and patterns with a focus on practical and efficient designs for large-scale long-term projects.

Nonsequential and Distributed Programming with Go - Christian Maurer
2021-01-19

Der Band bietet eine kompakte Einführung in

die Nichtsequentielle Programmierung als gemeinsamen Kern von Vorlesungen über Betriebssysteme, Verteilte Systeme, Parallele Algorithmen, Echtzeitprogrammierung und Datenbanktransaktionen. Basiskonzepte zur Synchronisation und Kommunikation nebenläufiger Prozesse werden systematisch dargestellt: Schlösser, Semaphore, Monitore, lokaler und netzweiter Botschaftenaustausch. Die Algorithmen sind in der Programmiersprache Google Go formuliert, mit der viele Synchronisationskonzepte ausgedrückt werden können.

Designing Data-Intensive Applications - Martin Kleppmann 2017-03-16

Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and

message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

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++.
Documenting Software Architectures - Paul
Clements 2010-10-05

Software architecture—the conceptual glue that holds every phase of a project together for its many stakeholders—is widely recognized as a critical element in modern software development. Practitioners have increasingly discovered that close attention to a software system’s architecture pays valuable dividends. Without an architecture that is appropriate for the problem being solved, a project will stumble along or, most likely, fail. Even with a superb architecture, if that architecture is not well understood or well communicated the project is unlikely to succeed. *Documenting Software Architectures, Second Edition*, provides the most complete and current guidance, independent of language or notation, on how to capture an architecture in a commonly understandable form. Drawing on their extensive experience, the authors first help you decide what information to

document, and then, with guidelines and examples (in various notations, including UML), show you how to express an architecture so that others can successfully build, use, and maintain a system from it. The book features rules for sound documentation, the goals and strategies of documentation, architectural views and styles, documentation for software interfaces and software behavior, and templates for capturing and organizing information to generate a coherent package. New and improved in this second edition: Coverage of architectural styles such as service-oriented architectures, multi-tier architectures, and data models Guidance for documentation in an Agile development environment Deeper treatment of documentation of rationale, reflecting best industrial practices Improved templates, reflecting years of use and feedback, and more documentation layout options A new, comprehensive example (available online), featuring documentation of a Web-based service-oriented system Reference

guides for three important architecture documentation languages: UML, AADL, and SySML

Programming C# 8.0 - Ian Griffiths 2019-11-26
C# is undeniably one of the most versatile programming languages available to engineers today. With this comprehensive guide, you'll learn just how powerful the combination of C# and .NET can be. Author Ian Griffiths guides you through C# 8.0 fundamentals and techniques for building cloud, web, and desktop applications. Designed for experienced programmers, this book provides many code examples to help you work with the nuts and bolts of C#, such as generics, LINQ, and asynchronous programming features. You'll get up to speed on .NET Core and the latest C# 8.0 additions, including asynchronous streams, nullable references, pattern matching, default interface implementation, ranges and new indexing syntax, and changes in the .NET tool chain. Discover how C# supports fundamental coding

features, such as classes, other custom types, collections, and error handling Learn how to write high-performance memory-efficient code with .NET Core's Span and Memory types Query and process diverse data sources, such as in-memory object models, databases, data streams, and XML documents with LINQ Use .NET's multithreading features to exploit your computer's parallel processing capabilities Learn how asynchronous language features can help improve application responsiveness and scalability

Modern Java Recipes - Ken Kousen 2017-08-11

The introduction of functional programming concepts in Java SE 8 was a drastic change for this venerable object-oriented language. Lambda expressions, method references, and streams fundamentally changed the idioms of the language, and many developers have been trying to catch up ever since. This cookbook will help. With more than 70 detailed recipes, author Ken Kousen shows you how to use the newest

features of Java to solve a wide range of problems. For developers comfortable with previous Java versions, this guide covers nearly all of Java SE 8, and includes a chapter focused on changes coming in Java 9. Need to understand how functional idioms will change the way you write code? This cookbook—chock full of use cases—is for you. Recipes cover: The basics of lambda expressions and method references Interfaces in the java.util.function package Stream operations for transforming and filtering data Comparators and Collectors for sorting and converting streaming data Combining lambdas, method references, and streams Creating instances and extract values from Java's Optional type New I/O capabilities that support functional streams The Date-Time API that replaces the legacy Date and Calendar classes Mechanisms for experimenting with concurrency and parallelism

DirectX 9 User Interfaces - Alan Thorn 2004 Companion CD included with Paint Shop Pro 8

evaluation edition! Interfaces strongly affect how an application or game is received by a user, no matter which cutting-edge features it may boast. This unique book presents a comprehensive solution for creating good interfaces using the latest version of DirectX. This involves building an interface library from the ground up. Divided into three sections, the book discusses the foundations of interface design, the construction of a feature-rich interface library, and the creation of a fully functional media player in DirectShow.

C# Programming :: - Harry. H. Chaudhary.
2014-06-02

This book gives a good start and complete introduction for C# Programming for Beginner's. While reading this book it is fun and easy to read it. This book is best suitable for first time C# readers, Covers all fast track topics of C# for all Computer Science students and Professionals. This book is targeted toward those who have little or no programming experience or

who might be picking up C# as a second language. The book has been structured and written with a purpose: to get you productive as quickly as possible. I've used my experiences in writing applications with C# and teaching C# to create a book that I hope cuts through the fluff and teaches you what you need to know. All too often, authors fall into the trap of focusing on the technology rather than on the practical application of the technology. I've worked hard to keep this book focused on teaching you practical skills that you can apply immediately toward a development project. This book is divided into ten Chapters, each of which focuses on a different aspect of developing applications with C#. These parts generally follow the flow of tasks you'll perform as you begin creating your own programs with C#. I recommend that you read them in the order in which they appear. Using C#, this book develops the concepts and theory of Building the Program Logic and Interfaces analysis, Exceptions, Delegates and

Events and other important things in a gradual, step-by-step manner, proceeding from concrete examples to abstract principles. Standish covers a wide range of both traditional and contemporary software engineering topics. This is a handy guide of sorts for any computer science engineering Students, Thinking In C# Programming is a solution bank for various complex problems related to C# and .NET. It can be used as a reference manual by Computer Science Engineering students. This Book also covers all aspects of B.TECH CS, IT, and BCA and MCA, BSC IT. Preview introduced programmers to a new era called functional programming. C# focused on bridging the gap between programming languages and databases. This book covers all the language features from the first version through C# . It also provides you with the essentials of using Visual Studio 2005 to let you enjoy its capabilities and save you time by using features such as IntelliSense. Learning a new programming language can be

intimidating. If you've never programmed before, the act of typing seemingly cryptic text to produce sleek and powerful applications probably seems like a black art, and you might wonder how you'll ever learn everything you need to know. The answer is, of course, one step at a time. The first step to learning a language is the same as that of any other activity: building confidence. Programming is part art and part science. Although it might seem like magic, it's more akin to illusion: After you know how things work a lot of the mysticism goes away, freeing you to focus on the mechanics necessary to produce any given desired result. Chapter 1 (Introduction To C# AND .NET) Chapter 2 (Your First Go at C# Programming) Chapter 3 (C# Data Types)' Chapter 4 (Building the Program Logic) Chapter 5 (Using Classes) Chapter 6 (Function Members) Chapter 7 (Structs, Enums, and Attributes) Chapter 8 (Interfaces) Chapter 9 (Exceptions) Chapter 10 (Delegates and Events) **Implementation Patterns** - Kent Beck

2007-10-23

Software Expert Kent Beck Presents a Catalog of Patterns Infinitely Useful for Everyday Programming Great code doesn't just function: it clearly and consistently communicates your intentions, allowing other programmers to understand your code, rely on it, and modify it with confidence. But great code doesn't just happen. It is the outcome of hundreds of small but critical decisions programmers make every single day. Now, legendary software innovator Kent Beck—known worldwide for creating Extreme Programming and pioneering software patterns and test-driven development—focuses on these critical decisions, unearthing powerful “implementation patterns” for writing programs that are simpler, clearer, better organized, and more cost effective. Beck collects 77 patterns for handling everyday programming tasks and writing more readable code. This new collection of patterns addresses many aspects of development, including class, state, behavior,

method, collections, frameworks, and more. He uses diagrams, stories, examples, and essays to engage the reader as he illuminates the patterns. You'll find proven solutions for handling everything from naming variables to checking exceptions.

Expert Python Programming - Michal Jaworski
2016-05-20

Become an ace Python programmer by learning best coding practices and advance-level concepts with Python 3.5 About This Book Based on the latest stable version of Python (version 3.5) Creating well manageable code that will run in various environments with different sets of dependencies Packed with advanced concepts and best practices to write efficient Python code Who This Book Is For The book would appeal to web developers and Python programmers who want to start using version 3.5 and write code efficiently. Basic knowledge of Python programming is expected. What You Will Learn Conventions and best practices that are widely

adopted in the python community Package python code effectively for community and production use Easy and lightweight ways to automate code deployment on remote systems Improve your code's quality, reliability, and performance Write concurrent code in python Extend python with code written in different languages In Detail Python is a dynamic programming language, used in a wide range of domains by programmers who find it simple, yet powerful. Even if you find writing Python code easy, writing code that is efficient and easy to maintain and reuse is a challenge. The focus of the book is to familiarize you with common conventions, best practices, useful tools and standards used by python professionals on a daily basis when working with code. You will begin with knowing new features in Python 3.5 and quick tricks for improving productivity. Next, you will learn advanced and useful python syntax elements brought to this new version. Using advanced object-oriented concepts and

mechanisms available in python, you will learn different approaches to implement metaprogramming. You will learn to choose good names, write packages, and create standalone executables easily. You will also be using some powerful tools such as buildout and virtualenv to release and deploy the code on remote servers for production use. Moving on, you will learn to effectively create Python extensions with C, C++, cython, and pyrex. The important factors while writing code such as code management tools, writing clear documentation, and test-driven development are also covered. You will now dive deeper to make your code efficient with general rules of optimization, strategies for finding bottlenecks, and selected tools for application optimization. By the end of the book, you will be an expert in writing efficient and maintainable code. Style and approach An easy-to-follow guide that covers industry followed best practices in Python programming *Programming Embedded Systems* - Michael Barr

2006-10-11

Authored by two of the leading authorities in the field, this guide offers readers the knowledge and skills needed to achieve proficiency with embedded software.

Design Patterns - Erich Gamma 1995

Software -- Software Engineering.

Effective Modern C++ - Scott Meyers

2014-11-11

Coming to grips with C++11 and C++14 is more than a matter of familiarizing yourself with the features they introduce (e.g., auto type declarations, move semantics, lambda expressions, and concurrency support). The challenge is learning to use those features effectively—so that your software is correct, efficient, maintainable, and portable. That's where this practical book comes in. It describes how to write truly great software using C++11 and C++14—i.e. using modern C++. Topics include: The pros and cons of braced initialization, noexcept specifications, perfect

forwarding, and smart pointer make functions The relationships among `std::move`, `std::forward`, rvalue references, and universal references Techniques for writing clear, correct, effective lambda expressions How `std::atomic` differs from `volatile`, how each should be used, and how they relate to C++'s concurrency API How best practices in "old" C++ programming (i.e., C++98) require revision for software development in modern C++ *Effective Modern C++* follows the proven guideline-based, example-driven format of Scott Meyers' earlier books, but covers entirely new material. "After I learned the C++ basics, I then learned how to use C++ in production code from Meyer's series of *Effective C++* books. *Effective Modern C++* is the most important how-to book for advice on key guidelines, styles, and idioms to use modern C++ effectively and well. Don't own it yet? Buy this one. Now". -- Herb Sutter, Chair of ISO C++ Standards Committee and C++ Software Architect at Microsoft

High Performance JavaScript - Nicholas C. Zakas
2010-03-11

If you're like most developers, you rely heavily on JavaScript to build interactive and quick-responding web applications. The problem is that all of those lines of JavaScript code can slow down your apps. This book reveals techniques and strategies to help you eliminate performance bottlenecks during development. You'll learn how to improve execution time, downloading, interaction with the DOM, page life cycle, and more. Yahoo! frontend engineer Nicholas C. Zakas and five other JavaScript experts—Ross Harmes, Julien Lecomte, Steven Levithan, Stoyan Stefanov, and Matt Sweeney—demonstrate optimal ways to load code onto a page, and offer programming tips to help your JavaScript run as efficiently and quickly as possible. You'll learn the best practices to build and deploy your files to a production environment, and tools that can help you find problems once your site goes live.

Identify problem code and use faster alternatives to accomplish the same task Improve scripts by learning how JavaScript stores and accesses data Implement JavaScript code so that it doesn't slow down interaction with the DOM Use optimization techniques to improve runtime performance Learn ways to ensure the UI is responsive at all times Achieve faster client-server communication Use a build system to minify files, and HTTP compression to deliver them to the browser

Learning Java - Patrick Niemeyer 2002

A tutorial introducing Java basics covers programming principles, integrating applets with Web applications, and using threads, arrays, and sockets.

Real World Haskell - Bryan O'Sullivan
2008-11-15

This easy-to-use, fast-moving tutorial introduces you to functional programming with Haskell. You'll learn how to use Haskell in a variety of practical ways, from short scripts to large and

demanding applications. Real World Haskell takes you through the basics of functional programming at a brisk pace, and then helps you increase your understanding of Haskell in real-world issues like I/O, performance, dealing with data, concurrency, and more as you move through each chapter.

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.

Optimized C++ - Kurt Guntheroth 2016-04-27

In today's fast and competitive world, a program's performance is just as important to customers as the features it provides. This practical guide teaches developers performance-tuning principles that enable optimization in C++. You'll learn how to make code that already embodies best practices of C++ design run faster and consume fewer resources on any computer—whether it's a watch, phone, workstation, supercomputer, or globe-spanning network of servers. Author Kurt Guntheroth provides several running examples that demonstrate how to apply these principles

incrementally to improve existing code so it meets customer requirements for responsiveness and throughput. The advice in this book will prove itself the first time you hear a colleague exclaim, "Wow, that was fast. Who fixed something?" Locate performance hot spots using the profiler and software timers Learn to perform repeatable experiments to measure performance of code changes Optimize use of dynamically allocated variables Improve performance of hot loops and functions Speed up string handling functions Recognize efficient algorithms and optimization patterns Learn the strengths—and weaknesses—of C++ container classes View searching and sorting through an optimizer's eye Make efficient use of C++ streaming I/O functions Use C++ thread-based concurrency features effectively

Cython - Kurt W. Smith 2015-01-21

Build software that combines Python's expressivity with the performance and control of C (and C++). It's possible with Cython, the

compiler and hybrid programming language used by foundational packages such as NumPy, and prominent in projects including Pandas, h5py, and scikits-learn. In this practical guide, you'll learn how to use Cython to improve Python's performance—up to 3000x— and to wrap C and C++ libraries in Python with ease. Author Kurt Smith takes you through Cython's capabilities, with sample code and in-depth practice exercises. If you're just starting with Cython, or want to go deeper, you'll learn how this language is an essential part of any performance-oriented Python programmer's arsenal. Use Cython's static typing to speed up Python code Gain hands-on experience using Cython features to boost your numeric-heavy Python Create new types with Cython—and see

how fast object-oriented programming in Python can be Effectively organize Cython code into separate modules and packages without sacrificing performance Use Cython to give Pythonic interfaces to C and C++ libraries Optimize code with Cython's runtime and compile-time profiling tools Use Cython's prange function to parallelize loops transparently with OpenMP

Head First Design Patterns - Eric Freeman
2004-10-25

Using research in neurobiology, cognitive science and learning theory, this text loads patterns into your brain in a way that lets you put them to work immediately, makes you better at solving software design problems, and improves your ability to speak the language of patterns with others on your team.