

C Design Patterns The Easy Way Standard Solutions For Everyday Programming Problems Great For Game Programming System Analysis App Programming Automation Database Systems

One of the best languages for the development of financial engineering and instrument pricing applications is C++. This book has several features that allow developers to write robust, flexible and extensible software systems. The book is an ANSI/ISO standard, fully object-oriented and interfaces with many third-party applications. It has support for templates and generic programming, massive reusability using templates (?write once?) and support for legacy C applications. In this book, author Daniel J. Duffy brings C++ to the next level by applying it to the design and implementation of classes, libraries and applications for option and derivative pricing models. He employs modern software engineering techniques to produce industrial-strength applications: Using the Standard Template Library (STL) in finance Creating your own template classes and functions Reusable data structures for vectors, matrices and tensors Classes for numerical analysis (numerical linear algebra ?) Solving the Black Scholes equations, exact and approximate solutions Implementing the Finite Difference Method in C++ Integration with the ?Gang of Four? Design Patterns Interfacing with Excel (output and Add-Ins) Financial engineering and XML Cash flow and yield curves Included with the book is a CD containing the source code in the Datasim Financial Toolkit. You can use this to get up to speed with your C++ applications by reusing existing classes and libraries. 'Unique... Let's all give a warm welcome to modern pricing tools.' -- Paul Wilmott, mathematician, author and fund manager

Take the struggle out of learning about design patterns! Through example-based teaching, "The Joy of Patterns" reveals the essence of design patterns as an advanced language for describing system design. This book illustrates how to build more efficient, robust, and reusable designs with this powerful programming paradigm. Design patterns have been used as integral techniques for creating better software, but getting started with design patterns has never been easy. Beginning with a description of the rationale behind design patterns, the discussion moves on to an overview of the basic pattern form, and then to a brief review of object-oriented concepts. Following this crucial background, the author presents a series of system design examples from initial conception all the way through code, discussing key design goals and the pros and cons of using various design patterns. Code is presented in Java, C++, and Visual Basic. The reader will gain insight into the inherent forces at work in the application design and the most effective application of numerous core design patterns as solutions to recurring programming problems. You will read and learn about such important ideas and topics as: Patterns as the language of design and the building blocks of architecture The value and use of many standard patterns in system design Extensible software development and change management Utilizing supporting patterns to prevent loose ends Testing and deploying new behaviors Understanding requirements and creating hinge points for entities that are likely to change "The Joy of Patterns "examines the relationship between specific programming languages and language-independent design patterns. It also looks at the role of patterns in building systems from scratch through system maintenance and product evolution. With the background and deeper understanding harnessed from this book, you will have the ability to unleash the considerable power of design patterns and enhance the quality of your programming efforts.

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Learn each of the original gang of four design patterns, and how they are relevant to modern PHP and Laravel development. Written by a working developer who uses these patterns every day, you will easily be able to implement each pattern into your workflow and improve your development. Each pattern is covered with full examples of how it can be used. Too often design patterns are explained using tricky concepts, when in fact they are easy to use and can enrich your everyday development. Design Patterns in PHP and Laravel aims to break down tricky concepts into humorous and easy-to-recall details, so that you can begin using design patterns easily in your everyday work with PHP and Laravel. This book teaches you design patterns in PHP and Laravel using real-world examples and plenty of humor. What You Will Learn Use the original gang of four design patterns in your PHP and Laravel development How each pattern should be used Solve problems when using the patterns Remember each pattern using mnemonics Who This Book Is For People using Laravel and PHP to do their job and want to improve their understanding of design patterns.

You can use this book to design a house for yourself with your family; you can use it to work with your neighbors to improve your town and neighborhood; you can use it to design an office, or a workshop, or a public building. And you can use it to guide you in the actual process of construction. After a ten-year silence, Christopher Alexander and his colleagues at the Center for Environmental Structure are now publishing a major statement in the form of three books which will, in their words, "lay the basis for an entirely new approach to architecture, building and planning, which will we hope replace existing ideas and practices entirely." The three books are The Timeless Way of Building, The Oregon Experiment, and this book, A Pattern Language. At the core of these books is the idea that people should design for themselves their own houses, streets, and communities. This idea may be radical (it implies a radical transformation of the architectural profession) but it comes simply from the observation that most of the wonderful places of the world were not made by architects but by the people. At the core of the books, too, is the point that in designing their environments people always rely on certain "languages," which, like the languages we speak, allow them to articulate and communicate an infinite variety of designs within a forma system which gives them coherence. This book provides a language of this kind. It will enable a person to make a design for almost any kind of building, or any part of the built environment. "Patterns," the units of this language, are answers to design problems (How high should a window sill be? How many stories should a building have? How much space in a neighborhood should be devoted to grass and trees?). More than 250 of the patterns in this pattern language are given: each consists of a problem statement, a discussion of the problem with an illustration, and a solution. As the authors say in their introduction, many of the patterns are archetypal, so deeply rooted in the nature of things that it seems likely that they will be a part of human nature, and human action, as much in five hundred years as they are today.

Apply business requirements to IT infrastructure and deliver a high-quality product by understanding architectures such as microservices, DevOps, and cloud-native using modern C++ standards and features Key Features Design scalable large-scale applications with the C++ programming language Architect software solutions in a cloud-based environment with continuous integration and continuous delivery (CI/CD) Achieve architectural goals by leveraging design patterns, language features, and useful tools Book Description Software architecture refers to the

high-level design of complex applications. It is evolving just like the languages we use. Modern C++ allows developers to write high-performance apps in a high-level language without sacrificing readability and maintainability. If you're working with modern C++, this practical guide will help you put your knowledge to work and design distributed, large-scale apps. You'll start by getting up to speed with architectural concepts, including established patterns and rising trends. The book will then explain what software architecture is and help you explore its components. Next, you'll discover the design concepts involved in application architecture and the patterns in software development, before going on to learn how to build, package, integrate, and deploy your components. In the concluding chapters, you'll explore different architectural qualities, such as maintainability, reusability, testability, performance, scalability, and security. Finally, you will get an overview of distributed systems, such as service-oriented architecture, microservices, and cloud-native, and understand how to apply them in application development. By the end of this book, you'll be able to build distributed services using modern C++ and associated tools to deliver solutions as per your clients' requirements. What you will learn Understand how to apply the principles of software architecture Apply design patterns and best practices to meet your architectural goals Write elegant, safe, and performant code using the latest C++ features Build applications that are easy to maintain and deploy Explore the different architectural approaches and learn to apply them as per your requirement Simplify development and operations using application containers Discover various techniques to solve common problems in software design and development Who this book is for This software architecture C++ programming book is for experienced C++ developers who are looking to become software architects or are interested in developing enterprise-grade applications.

With Learning JavaScript Design Patterns, you'll learn how to write beautiful, structured, and maintainable JavaScript by applying classical and modern design patterns to the language. If you want to keep your code efficient, more manageable, and up-to-date with the latest best practices, this book is for you. Explore many popular design patterns, including Modules, Observers, Facades, and Mediators. Learn how modern architectural patterns—such as MVC, MVP, and MVVM—are useful from the perspective of a modern web application developer. This book also walks experienced JavaScript developers through modern module formats, how to namespace code effectively, and other essential topics. Learn the structure of design patterns and how they are written Understand different pattern categories, including creational, structural, and behavioral Walk through more than 20 classical and modern design patterns in JavaScript Use several options for writing modular code—including the Module pattern, Asynchronous Module Definition (AMD), and CommonJS Discover design patterns implemented in the jQuery library Learn popular design patterns for writing maintainable jQuery plug-ins "This book should be in every JavaScript developer's hands. It's the go-to book on JavaScript patterns that will be read and referenced many times in the future."—Andrée Hansson, Lead Front-End Developer, presis!

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.

A comprehensive guide with extensive coverage on concepts such as OOP, functional programming, generic programming, and STL along with the latest features of C++ Key Features Delve into the core patterns and components of C++ in order to master application design Learn tricks, techniques, and best practices to solve common design and architectural challenges Understand the limitation imposed by C++ and how to solve them using design patterns Book Description C++ is a general-purpose programming language designed with the goals of efficiency, performance, and flexibility in mind. Design patterns are commonly accepted solutions to well-recognized design problems. In essence, they are a library of reusable components, only for software architecture, and not for a concrete implementation. The focus of this book is on the design patterns that naturally lend themselves to the needs of a C++ programmer, and on the patterns that uniquely benefit from the features of C++, in particular, the generic programming. Armed with the knowledge of these patterns, you will spend less time searching for a solution to a common problem and be familiar with the solutions developed from experience, as well as their advantages and drawbacks. The other use of design patterns is as a concise and an efficient way to communicate. A pattern is a familiar and instantly recognizable solution to specific problem; through its use, sometimes with a single line of code, we can convey a considerable amount of information. The code conveys: "This is the problem we are facing, these are additional considerations that are most important in our case; hence, the following well-known solution was chosen." By the end of this book, you will have gained a comprehensive understanding of design patterns to create robust, reusable, and maintainable code. What you will learn Recognize the most common design patterns used in C++ Understand how to use C++ generic programming to solve common design problems Explore the most powerful C++ idioms, their strengths, and drawbacks Rediscover how to use popular C++ idioms with generic programming Understand the impact of design patterns on the program's performance Who this book is for This book is for experienced C++ developers and programmers who wish to learn about software design patterns and principles and apply them to create robust, reusable, and easily maintainable apps.

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include · Dividing an enterprise application into layers · The major approaches to organizing business logic · An in-depth treatment of mapping between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces

* Allen Holub is a highly regarded instructor for the University of California, Berkeley, Extension. He has taught since 1982 on various topics, including Object-Oriented Analysis and Design, Java, C++, C.

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Holub will use this book in his Berkeley Extension classes. * Holub is a regular presenter at the Software Development conferences and is Contributing Editor for the online magazine JavaWorld, for whom he writes the Java Toolbox. He also wrote the OO Design Process column for IBM DeveloperWorks. * This book is not time-sensitive. It is an extremely well-thought out approach to learning design patterns, with Java as the example platform, but the concepts presented are not limited to just Java programmers. This is a complement to the Addison-Wesley seminal "Design Patterns" book by the "Gang of Four". Describes ways to incorporate domain modeling into software development.

Get hands-on experience with each Gang of Four design pattern using C#. For each of the patterns, you'll see at least one real-world scenario, a coding example, and a complete implementation including output. In the first part of Design Patterns in C#, you will cover the 23 Gang of Four (GoF) design patterns, before moving onto some alternative design patterns, including the Simple Factory Pattern, the Null Object Pattern, and the MVC Pattern. The final part winds up with a conclusion and criticisms of design patterns with chapters on anti-patterns and memory leaks. By working through easy-to-follow examples, you will understand the concepts in depth and have a collection of programs to port over to your own projects. Along the way, the author discusses the different creational, structural, and behavioral patterns and why such classifications are useful. In each of these chapters, there is a Q&A session that clears up any doubts and covers the pros and cons of each of these patterns. He finishes the book with FAQs that will help you consolidate your knowledge. This book presents the topic of design patterns in C# in such a way that anyone can grasp the idea. What You Will Learn Work with each of the design patterns Implement the design patterns in real-world applications Select an alternative to these patterns by comparing their pros and cons Use Visual Studio Community Edition 2017 to write code and generate output Who This Book Is For Software developers, software testers, and software architects.

The second edition of The Boost C++ Libraries introduces 72 Boost libraries that provide a wide range of useful capabilities. They help you manage memory and process strings more easily. They provide containers and other data structures that go well beyond what the standard library offers. They make it easy to build platform-independent network applications. Simply put, these 72 libraries greatly expand your C++ toolbox. The second edition contains more than 430 examples. All examples are as short as possible, but they are complete, so you can compile and run them as is. They show you what the Boost libraries offer and give you a head start on using the libraries in your own applications. The goal of this book is to increase your efficiency as a C++ developer and to simplify software development with C++. The Boost libraries introduced in this book will help you write less code with fewer bugs and finish projects faster. Your code will be more concise and self-explanatory and more easily adapted when requirements change. The second edition is based on the Boost libraries 1.55.0 and 1.56.0 with the latter version having been released in August 2014. The examples are based on C++11 and have been tested with Visual Studio 2013, GCC 4.8 and Clang 3.3 on various platforms. For Boost libraries which were incorporated into the C++11 standard library, differences between Boost and the standard library are highlighted. The Boost libraries are one of the most important and influential open source C++ libraries. Their source code is available under a permissive free software license. Several Boost libraries have been incorporated into the C++11 standard library. The Boost libraries are developed and supported by the Boost community - a worldwide developer community with a strong interest in pushing C++ boundaries further.

Programming in the Large with Design Patterns is a terrific resource for learning about design patterns. It starts with a general introduction to all types of programming patterns and goes on to describe 10 of the most popular design patterns in detail: Singleton, Iterator, Adapter, Decorator, State, Strategy, Factory Method, Observer, Facade and Template Method. Each pattern is introduced with a non-technical example or story that illustrates the pattern concept. The details are described with Java code examples and UML diagrams. Each pattern description also includes a discussion section that offers more in-depth information for the curious. For example, the discussion section for Singleton explains why introducing a singleton is only marginally better than using a global variable. Instructor resources, including PowerPoint presentation slides and review questions with answers, are available at the companion website <http://programminglarge.com/>.

If you want to speed up the development of your .NET applications, you're ready for C# design patterns -- elegant, accepted and proven ways to tackle common programming problems. This practical guide offers you a clear introduction to the classic object-oriented design patterns, and explains how to use the latest features of C# 3.0 to code them. C# Design Patterns draws on new C# 3.0 language and .NET 3.5 framework features to implement the 23 foundational patterns known to working developers. You get plenty of case studies that reveal how each pattern is used in practice, and an insightful comparison of patterns and where they would be best used or combined. This well-organized and illustrated book includes: An explanation of design patterns and why they're used, with tables and guidelines to help you choose one pattern over another Illustrated coverage of each classic Creational, Structural, and Behavioral design pattern, including its representation in UML and the roles of its various players C# 3.0 features introduced by example and summarized in sidebars for easy reference Examples of each pattern at work in a real .NET 3.5 program available for download from O'Reilly and the author's companion web site Quizzes and exercises to test your understanding of the material. With C# 3.0 Design Patterns, you learn to make code correct, extensible and efficient to save time up front and eliminate problems later. If your business relies on efficient application development and quality code, you need C# Design Patterns.

Practical FP in Scala: A hands-on approach, is a book for intermediate to advanced Scala developers. Aimed at those who understand functional effects, referential transparency and the benefits of functional programming to some extent but who are missing some pieces to put all these concepts together to build a large application in a time-constrained manner. Throughout the chapters we will design, architect and develop a complete stateful application serving an API via HTTP, accessing a database and dealing with cached data, using the best practices and best functional libraries available in the Cats ecosystem. You will also learn about common design patterns such as managing state, error handling and anti-patterns, all accompanied by clear examples. Furthermore, at the end of the book, we will dive into some advanced concepts such as MTL, Classy Optics and Typeclass derivation.

"One of the great things about the book is the way the authors explain concepts very simply using analogies rather than programming examples--this has been very inspiring for a product I'm working on: an audio-only introduction to OOP and software development." --Bruce Eckel "...I would expect that readers with a basic understanding of object-oriented programming and design would find this book useful, before approaching design patterns completely. Design Patterns Explained complements the existing design patterns texts and may perform a very useful role, fitting between introductory texts such as UML Distilled and the more advanced patterns books." --James Noble Leverage the quality and productivity benefits of patterns--without the complexity! Design Patterns Explained, Second Edition is the field's simplest, clearest, most practical introduction to patterns. Using dozens of updated Java examples, it shows programmers and architects exactly how to use patterns to design, develop, and deliver software far more effectively. You'll start with a complete overview of the fundamental principles of patterns, and the role of object-oriented analysis and design in contemporary software development. Then, using easy-to-understand sample code, Alan Shalloway and James Trott illuminate dozens of today's most useful patterns: their underlying concepts, advantages, tradeoffs, implementation techniques, and pitfalls to avoid. Many patterns are accompanied by UML diagrams. Building on their best-selling First Edition, Shalloway and Trott have thoroughly updated this book to reflect new software design trends, patterns, and implementation techniques. Reflecting extensive reader feedback, they have deepened and clarified coverage throughout, and reorganized content for even greater ease of understanding. New and revamped coverage in this edition includes Better ways to start "thinking in patterns" How design patterns can facilitate agile development using eXtreme Programming and other methods How to use

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commonality and variability analysis to design application architectures The key role of testing into a patterns-driven development process How to use factories to instantiate and manage objects more effectively The Object-Pool Pattern—a new pattern not identified by the "Gang of Four" New study/practice questions at the end of every chapter Gentle yet thorough, this book assumes no patterns experience whatsoever. It's the ideal "first book" on patterns, and a perfect complement to Gamma's classic Design Patterns. If you're a programmer or architect who wants the clearest possible understanding of design patterns—or if you've struggled to make them work for you—read this book.

Praise for Design Patterns in Ruby " Design Patterns in Ruby documents smart ways to resolve many problems that Ruby developers commonly encounter. Russ Olsen has done a great job of selecting classic patterns and augmenting these with newer patterns that have special relevance for Ruby. He clearly explains each idea, making a wealth of experience available to Ruby developers for their own daily work." —Steve Metsker, Managing Consultant with Dominion Digital, Inc. "This book provides a great demonstration of the key 'Gang of Four' design patterns without resorting to overly technical explanations. Written in a precise, yet almost informal style, this book covers enough ground that even those without prior exposure to design patterns will soon feel confident applying them using Ruby. Olsen has done a great job to make a book about a classically 'dry' subject into such an engaging and even occasionally humorous read." —Peter Cooper "This book renewed my interest in understanding patterns after a decade of good intentions. Russ picked the most useful patterns for Ruby and introduced them in a straightforward and logical manner, going beyond the GoF's patterns. This book has improved my use of Ruby, and encouraged me to blow off the dust covering the GoF book." —Mike Stok " Design Patterns in Ruby is a great way for programmers from statically typed objectoriented languages to learn how design patterns appear in a more dynamic, flexible language like Ruby." —Rob Sanheim, Ruby Ninja, Relevance Most design pattern books are based on C++ and Java. But Ruby is different—and the language's unique qualities make design patterns easier to implement and use. In this book, Russ Olsen demonstrates how to combine Ruby's power and elegance with patterns, and write more sophisticated, effective software with far fewer lines of code. After reviewing the history, concepts, and goals of design patterns, Olsen offers a quick tour of the Ruby language—enough to allow any experienced software developer to immediately utilize patterns with Ruby. The book especially calls attention to Ruby features that simplify the use of patterns, including dynamic typing, code closures, and "mixins" for easier code reuse. Fourteen of the classic "Gang of Four" patterns are considered from the Ruby point of view, explaining what problems each pattern solves, discussing whether traditional implementations make sense in the Ruby environment, and introducing Ruby-specific improvements. You'll discover opportunities to implement patterns in just one or two lines of code, instead of the endlessly repeated boilerplate that conventional languages often require. Design Patterns in Ruby also identifies innovative new patterns that have emerged from the Ruby community. These include ways to create custom objects with metaprogramming, as well as the ambitious Rails-based "Convention Over Configuration" pattern, designed to help integrate entire applications and frameworks. Engaging, practical, and accessible, Design Patterns in Ruby will help you build better software while making your Ruby programming experience more rewarding.

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.

Apply modern C++17 to the implementations of classic design patterns. As well as covering traditional design patterns, this book fleshes out new patterns and approaches that will be useful to C++ developers. The author presents concepts as a fun investigation of how problems can be solved in different ways, along the way using varying degrees of technical sophistication and explaining different sorts of trade-offs. Design Patterns in Modern C++ also provides a technology demo for modern C++, showcasing how some of its latest features (e.g., coroutines) make difficult problems a lot easier to solve. The examples in this book are all suitable for putting into production, with only a few simplifications made in order to aid readability. What You Will Learn Apply design patterns to modern C++ programming Use creational patterns of builder, factories, prototype and singleton Implement structural patterns such as adapter, bridge, decorator, facade and more Work with the behavioral patterns such as chain of responsibility, command, iterator, mediator and more Apply functional design patterns such as Monad and more Who This Book Is For Those with at least some prior programming experience, especially in C++.

The biggest challenge facing many game programmers is completing their game. Most game projects fizzle out, overwhelmed by the complexity of their own code. Game Programming Patterns tackles that exact problem. Based on years of experience in shipped AAA titles, this book collects proven patterns to untangle and optimize your game, organized as independent recipes so you can pick just the patterns you need. You will learn how to write a robust game loop, how to organize your entities using components, and take advantage of the CPUs cache to improve your performance. You'll dive deep into how scripting engines encode behavior, how quadrees and other spatial partitions optimize your engine, and how other classic design patterns can be used in games.

Hands-On Design Patterns with C# and .NET Core covers all the essential design patterns that help .NET developers build effective applications. The book will add to your skills by showing you how these patterns can be implemented easily in everyday programming, enabling you to develop robust applications with optimal performance.

This book will focus on the design patterns in C#.The knowledge and efficiency of a programmer is often judged by these concepts in most of the interviews.The author has used his vast experience to choose the most simple examples to help readers for the easy understanding of the topic.His focus here is totally on design and not on the programming logic.Though C# is used as the programming language but if the reader is familiar with any other popular language like C++,Java etc,he/she can also get the concepts very easily.Each of the chapter consists of the core concept, at least one real life example,one computer world example, one complete implementation for each of the patterns with corresponding outputs .The author tried to avoid unnecessary discussion on each topic and made them concise.He has directly entered each of the topic with an easy to remember implementation.

Once you've learned the fundamentals of C#, understanding Design Patterns is essential for writing clear, concise and effective code. This book gives you a step-by-step guide to object-oriented development, using tried and trusted techniques. The examples have been kept simple, enabling you to concentrate on understanding the concepts and application of each pattern. All examples have been designed around a common theme, making it easier to see how they relate to each other and how you can adapt them to your applications. While the book assumes a basic knowledge of C# you don't need to be a guru. This book is perfect for the programmer wishing to take their skills to the next level, and feel confident about using C# in real applications. Coverage includes all 23 of the patterns from the "Gang of Four" work, additional patterns including Model-View-Controller, and simple UML diagrams.

Apply the latest editions of the C++ standard to the implementation of design patterns. As well as covering traditional design patterns, this book fleshes out new design patterns and approaches that will be useful to modern C++ developers. Author Dmitri Nesteruk presents concepts as a fun investigation of how problems can be solved in different ways, along the way using varying degrees of technical sophistication and explaining different sorts of trade-offs. Design Patterns in Modern C++20, Second Edition also provides a technology demo for modern C++, showcasing how some of its latest features (e.g., coroutines, modules and more) make difficult problems a lot easier to solve. The examples in this book are all suitable for putting into

production, with only a few simplifications made in order to aid readability. What You Will Learn Use creational patterns such as builder, factories, prototype and singleton Implement structural patterns such as adapter, bridge, decorator, facade and more Work with the behavioral patterns such as chain of responsibility, command, iterator, mediator and more Apply functional design patterns such as the Maybe Monad Who This Book Is For This book is for both beginner and experienced C++ developers.

Design Patterns Elements of Reusable Object-Oriented Software Pearson Deutschland GmbH

Jack the Ripper and legacy codebases have more in common than you'd think. Inspired by forensic psychology methods, you'll learn strategies to predict the future of your codebase, assess refactoring direction, and understand how your team influences the design. With its unique blend of forensic psychology and code analysis, this book arms you with the strategies you need, no matter what programming language you use. Software is a living entity that's constantly changing. To understand software systems, we need to know where they came from and how they evolved. By mining commit data and analyzing the history of your code, you can start fixes ahead of time to eliminate broken designs, maintenance issues, and team productivity bottlenecks. In this book, you'll learn forensic psychology techniques to successfully maintain your software. You'll create a geographic profile from your commit data to find hotspots, and apply temporal coupling concepts to uncover hidden relationships between unrelated areas in your code. You'll also measure the effectiveness of your code improvements. You'll learn how to apply these techniques on projects both large and small. For small projects, you'll get new insights into your design and how well the code fits your ideas. For large projects, you'll identify the good and the fragile parts. Large-scale development is also a social activity, and the team's dynamics influence code quality. That's why this book shows you how to uncover social biases when analyzing the evolution of your system. You'll use commit messages as eyewitness accounts to what is really happening in your code. Finally, you'll put it all together by tracking organizational problems in the code and finding out how to fix them. Come join the hunt for better code! What You Need: You need Java 6 and Python 2.7 to run the accompanying analysis tools. You also need Git to follow along with the examples.

Learn iOS Design Patterns! Design patterns are reusable solutions to common development problems. They aren't project specific, so you can adapt and use them in countless apps. By learning design patterns, you'll become a better developer, save time and work less. Design Patterns by Tutorials is here to help! This book is the easiest and fastest way to get hands-on experience with the iOS design patterns you need to know. Who This Book Is For Whether you're a beginner, intermediate or advanced iOS developer, this book is for you. You can either read this book from cover to cover, or skip around to just the patterns you want to learn. Topics Covered in Design Patterns by Tutorials Getting Started: You'll first learn about how design patterns work and how they can help you build better, cleaner apps. Fundamental Patterns: You'll progress onto fundamental design patterns, such as MVC, Delegation, and Strategy, which you're likely to use on every iOS app. Intermediate Patterns: You'll then learn about intermediate design patterns, such as MVVM, Factory, and Adapter, which are less common than fundamental patterns but still very useful for most apps. You'll finish off by learning about advanced design patterns, including Flyweight, Mediator and Command. You likely won't use these on every app, but they may be just what you need to solve a difficult problem. One thing you can count on: after reading this book, you'll be well-prepared to use design patterns in your own apps! It's time to capitalize on your mastery of Cocoa with Pro Objective-C Design Patterns for iOS. You've developed apps that impressed and performed, and now you're ready to jump into development practices that will leave you with more effective, efficient, and professional level apps. This book is the element you need to make the jump from journeyman to master. All too often, developers grind through building good apps on willpower and a vigorous focus on code development, leaving them unaware of and unable to benefit from the underlying structural and functional design patterns. Pro Objective-C Design Patterns for iOS will teach you those design patterns that have always been present at some level in your code, but were never recognized, acknowledged, or fully utilized. Implementation of specific pattern approaches will prove their value to any developer working in the iOS application arena. You'll learn to master classic patterns like singleton, abstract factory, chain of responsibility, and observer. You'll also discover less well-known but useful patterns like memento, composite, command, and mediator. OVERCOME ANY PROGRAMMING OBSTACLE! 2nd Edition: Upgraded for *MORE* Content! " This is a great book for those who want to understand every design pattern in a clear and simple way. " - Ronald Conley, from Amazon.com " A good workbook style for learning patterns. " - Milit Yong, from Amazon.com " Very detailed but not complicated, very comprehensive. " - Fynn Arnio, from Amazon.com Are you READY to take your programming to the Next Level? Warning. Within these pages are special programming solutions that help you with plenty of common programming problems you'll encounter. What took YEARS of development, with collective programming experience from dozens of skilled programmers, is now available to you in a single download. This book is also outfitted in C# - Microsoft's key programming language for software development. And best of all, you won't spend HUNDREDS of dollars for learning this information. For less than a cup of coffee, Download your copy today Topics include: - How to auto-update your data - so you don't have to - How to apply these patterns in another language- How to create Custom-Built Data Objects- Important things to know BEFORE implementing certain patterns...- A Special way to apply what you've learned here and Much, much more! World-Class Training This book breaks your training down into easy-to-understand modules. You'll learn each essential Design Pattern - one by one. You'll learn how to apply them in your own code. You'll have chances to improve your code in any way you like. so you can write great code - even as a beginner! Scroll to the top and select the "BUY" button for instant download. You'll be happy you did!

Larman covers how to investigate requirements, create solutions and then translate designs into code, showing developers how to make practical use of the most significant recent developments. A summary of UML notation is included

Implement robust applications by applying efficient Design Patterns with .NET 5 and C# KEY FEATURES ? Detailed theoretical concepts covered, including the use of encapsulation, interfaces, and inheritance. ? Access to solutions applied for software strategy and final product output. ? Simplified demonstration of real applications implementing numerous design patterns. DESCRIPTION This book covers detailed aspects of Design Patterns and Object-Oriented Programming concepts using the most modern version of the C# language and .NET platform, including many real-world examples and good practice guidelines that help developers in building robust and extensible applications. The book begins with the essential concepts of C# programming and the .NET platform. You get your foundation strong by understanding SOLID Principles and the actual implementation of reliable applications. You will be working on most

common Design Patterns such as Abstract Factory, Adapter, Composite, Proxy, Command, Strategy, Observer, Factory Method, Singleton, Builder, Interpreter, Mediator, and many other patterns that will help you to create solid enterprise applications. You will also witness the performance of these design patterns in a real software development environment with the help of practical examples. After learning the most common Design Patterns practiced in .NET enterprise applications, the reader will be able to understand and apply good practices of software development based on the object-oriented paradigm to develop complex enterprise applications efficiently and simply. WHAT YOU WILL LEARN ? Fine-tune your knowledge about interfaces, polymorphism, and encapsulation. ? Learn to practice implementing design patterns in enterprise applications. ? Implement rich design patterns: Observer, Strategy, Command, Proxy, and more. ? Get to learn the latest additional design patterns such as Builder, Bridge, and Decorator. ? Includes illustrations, examples, and real use-cases of .NET 5.0 applications. WHO THIS BOOK IS FOR This book is for .NET developers, application developers, and software engineers who want to develop .NET applications with proven techniques and build error-free applications. This book also attracts fresh graduates and entry-level developers as long as basic knowledge about .NET is known to them. TABLE OF CONTENTS 1. C# Fundamentals 2. Introduction to .NET 5 3. Basic Concepts of Object-Oriented Programming 4. Interfaces in C# 5. Encapsulation and Polymorphism in C# 6. SOLID Principles in C# 7. Abstract Factory 8. Abstract Factory 9. Prototype 10. Factory Method 11. Adapter 12. Composite 13. Proxy 14. Command 15. Strategy 16. Observer 17. Good Practices and Additional Design Patterns Build modular applications that are easy to scale using the most powerful components and design patterns that React can offer you right now About This Book Dive into the core patterns and components of React.js in order to master your application's design Improve their debugging skills using the DevTools This book is packed with easy-to-follow examples that can be used to create reusable code and extensible designs Who This Book Is For If you want to increase your understanding of React and apply it to real-life application development, then this book is for you. What You Will Learn Write clean and maintainable code Create reusable components applying consolidated techniques Use React effectively in the browser and node Choose the right styling approach according to the needs of the applications Use server-side rendering to make applications load faster Build high-performing applications by optimizing components In Detail Taking a complete journey through the most valuable design patterns in React, this book demonstrates how to apply design patterns and best practices in real-life situations, whether that's for new or already existing projects. It will help you to make your applications more flexible, perform better, and easier to maintain – giving your workflow a huge boost when it comes to speed without reducing quality. We'll begin by understanding the internals of React before gradually moving on to writing clean and maintainable code. We'll build components that are reusable across the application, structure applications, and create forms that actually work. Then we'll style React components and optimize them to make applications faster and more responsive. Finally, we'll write tests effectively and you'll learn how to contribute to React and its ecosystem. By the end of the book, you'll be saved from a lot of trial and error and developmental headaches, and you will be on the road to becoming a React expert. Style and approach The design patterns in the book are explained using real-world, step-by-step examples. For each design pattern, there are hints about when to use it and when to look for something more suitable. This book can also be used as a practical guide, showing you how to leverage design patterns.

Looks at the principles and clean code, includes case studies showcasing the practices of writing clean code, and contains a list of heuristics and "smells" accumulated from the process of writing clean code. A recent survey stated that 52% of embedded projects are late by 4-5 months. This book can help get those projects in on-time with design patterns. The author carefully takes into account the special concerns found in designing and developing embedded applications specifically concurrency, communication, speed, and memory usage. Patterns are given in UML (Unified Modeling Language) with examples including ANSI C for direct and practical application to C code. A basic C knowledge is a prerequisite for the book while UML notation and terminology is included. General C programming books do not include discussion of the constraints found within embedded system design. The practical examples give the reader an understanding of the use of UML and OO (Object Oriented) designs in a resource-limited environment. Also included are two chapters on state machines. The beauty of this book is that it can help you today. . Design Patterns within these pages are immediately applicable to your project Addresses embedded system design concerns such as concurrency, communication, and memory usage Examples contain ANSI C for ease of use with C programming code A catalog of solutions to commonly occurring design problems, presenting 23 patterns that allow designers to create flexible and reusable designs for object-oriented software. Describes the circumstances in which each pattern is applicable, and discusses the consequences and trade-offs of using the pattern within a larger design. Patterns are compiled from real systems, and include code for implementation in object-oriented programming languages like C++ and Smalltalk. Includes a bibliography. Annotation copyright by Book News, Inc., Portland, OR

Shows how to combine mathematical finance and object-oriented programming to practical effect.

Design Patterns allow you to create more flexible, elegant, and ultimately reusable designs without having to rediscover the design solutions. Design Patterns as your guide, you will learn how these patterns fit into the software development process. All patterns are compiled from real systems and are based on real-world examples. Each pattern also includes code that demonstrates how it may be implemented in object-oriented programming languages like C++. The book is divided into 2 parts: 1. The first part vividly explains the concept of each design pattern through life 2. The second part applies design patterns to GUI and QT Games examples

Java developers know that design patterns offer powerful productivity benefits but few books have been specific enough to address their programming challenges. With "Java Design Patterns", there's finally a hands-on guide focused specifically on real-world Java development. The book covers three main categories of design patterns--creational, structural, and behavioral--and the example programs and useful variations can be found on the accompanying CD-ROM.

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