Beginning Solid Principles And Design Patterns For Aspnet Developers

Python is currently used in many different areas. In all of these areas, experienced professionals can find examples of inefficiency, problems, and other perils, as a result of bad code. After reading this book, readers will understand these problems, and more importantly, understand how to correct them. Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications. What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques

required to become a successful software architect.

Summary .NET Core in Action shows .NET developers how to build professional software applications with .NET Core. Learn how to convert existing .NET code to work on multiple platforms or how to start new projects with knowledge of the tools and capabilities of .NET Core. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology .NET Core is an open source framework that lets you write and run .NET applications on Linux and Mac, without giving up on Windows. Built for everything from lightweight web apps to industrial-strength distributed systems, it's perfect for deploying .NET servers to any cloud platform, including AWS and GCP. About the Book .NET Core in Action introduces you to cross-platform development with .NET Core. This hands-on guide concentrates on new Core features as you walk through familiar tasks like testing, logging, data access, and networking. As you go, you'll explore modern architectures like microservices and cloud data storage, along with practical matters like performance profi ling, localization, and signing assemblies. What's Inside Choosing the right tools Testing, profiling, and debugging Interacting with web services Converting existing projects to .NET Core Creating and using NuGet packages About the Reader All examples are in C#. About the Author Dustin Metzgar is a seasoned developer and architect involved in numerous .NET Core projects. Dustin works for Microsoft. Table of Contents Why .NET Core? Building your first .NET Core applications How to build with .NET Core Unit testing with xUnit Working with relational databases Simplify data access with object-relational mappers Creating a microservice Debugging Performance and profiling Building world-ready applications Multiple frameworks and runtimes Preparing for release appendix A - Frameworks and runtimes appendix B - xUnit command-line options appendix C - What's in the .NET Standard Library? appendix D - NuGet cache locations

Agile coding with design patterns and SOLID principles As every developer knows, requirements are subject to change. But when you build adaptability into your code, you can respond to change more easily and avoid disruptive rework. Focusing on Agile programming, this book describes the best practices, principles, and patterns that enable you to create flexible, adaptive code--and deliver better business value. Expert guidance to bridge the gap between theory and practice Get grounded in Scrum: artifacts, roles, metrics, phases Organize and manage architectural dependencies Review best practices for patterns and anti-patterns Master SOLID principles: single-responsibility, open/closed, Liskov substitution Manage the versatility of interfaces for adaptive code Perform unit testing and refactoring in tandem See how delegation and abstraction impact code adaptability Learn best ways to implement dependency interjection Apply what you learn to a pragmatic, agile coding project Get code samples at: http://github.com/garymclean/AdaptiveCode

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

When you use Hibernate in your projects, you quickly recognize that you need to do more than just add @Entity annotations to your domain model classes. Real-world applications often require advanced mappings, complex queries, custom data types and caching. Hibernate can do all of that. You just have to know which annotations and APIs you need to use. Hibernate Tips - More than 70 solutions to common Hibernate problems shows you how to efficiently implement your persistence layer with Hibernate's basic and advanced features. Each Hibernate Tip consists of one or more code samples and an easy to follow step-by-step explanation. You can also download an example project with executable test cases for each Hibernate Tip. Throughout this book, you will get more than 70 ready-to-use solutions that show you how to: - Define standard mappings for basic attributes and entity associations. - Implement your own attribute mappings and support custom data types. - Use Hibernate's Java 8 support and other proprietary features. - Read data from the database with JPQL, Criteria API, and native SQL queries. - Call stored procedures and database functions. This book is for developers who are already working with Hibernate and who are looking for solutions for their current development tasks. It's not a book for beginners who are looking for extensive descriptions of Hibernate's general concepts. The tips are designed as self-contained recipes which provide a specific solution and can be accessed when needed. Most of them contain links to related tips which you can follow if you want to dive deeper into a topic or need a slightly different solution. There is no need to read the tips in a specific order. Feel free to read the book from cover to cover or to just pick the tips that help you in your current project.

This book will teach the concepts of test driven development in Java so you can build clean, maintainable and robust code Key Features Explore the most popular TDD tools and frameworks and become more proficient in building applications Create applications with better code design, fewer bugs, and higher test coverage, enabling you to get them to market quickly Implement test-driven programming methods into your development workflows Book Description Test-driven development (TDD) is a development approach that relies on a test-first procedure that emphasizes writing a test before writing the necessary code, and then refactoring the code to optimize it.The value of performing TDD with Java, one of the longest established programming languages, is to improve the productivity of programmers and the maintainability and performance of code, and develop a deeper understanding of the language and how to employ it effectively. Starting with the basics of TDD and understanding why its adoption is

beneficial, this book will take you from the first steps of TDD with Java until you are confident enough to embrace the practice in your day-to-day routine.You'll be guided through setting up tools, frameworks, and the environment you need, and we will dive right into hands-on exercises with the goal of mastering one practice, tool, or framework at a time. You'll learn about the Red-Green-Refactor procedure, how to write unit tests, and how to use them as executable documentation.With this book, you'll also discover how to design simple and easily maintainable code, work with mocks, utilize behavior-driven development, refactor old legacy code, and release a half-finished feature to production with feature toggles.You will finish this book with a deep understanding of the test-driven development methodology and the confidence to apply it to application programming with Java. What you will learn Explore the tools and frameworks required for effective TDD development Perform the Red-Green-Refactor process efficiently, the pillar around which all other TDD procedures are based Master effective unit testing in isolation from the rest of your code Design simple and easily maintainable code by implementing different techniques Use mocking frameworks and techniques to easily write and quickly execute tests Develop an application to implement behavior-driven development in conjunction with unit testing Enable and disable features using feature toggles Who this book is for If you're an experienced Java developer and want to implement more effective methods of programming systems and applications, then this book is for you. Become a professional .NET developer by learning expert techniques for building enterprise-grade applications Key Features Explore the advanced features of C# and .NET 5 to enhance your code and productivity Follow clear and easy instructions for building an end-to-end enterprise application Learn how to build scalable web applications and host them on the cloud Book Description .NET Core is one of the most popular programming platforms in the world for an increasingly large community of developers thanks to its excellent cross-platform support. This book will show you how to confidently use the features of .NET 5 with C# 9 to build robust enterprise applications. Throughout the book, you'll work on creating an enterprise app and adding a key component to the app with each chapter, before ?nally getting it ready for testing and deployment. You'll learn concepts relating to advanced data structures, the Entity Framework Core, parallel programming, and dependency injection. As you progress, you'll cover various authentication and authorization schemes provided by .NET Core to make your apps and APIs secure. Next, you'll build web apps using ASP.NET Core 5 and deploy them on the cloud while working with various cloud components using Azure. The book then shows you how to use the latest Microsoft Visual Studio 2019 and C# 9 to simplify developer tasks, and also explores tips and tricks in Visual Studio 2019 to improve your productivity. Later, you'll discover various testing techniques such as unit testing and performance testing as well as di?erent methods to deploy enterprise apps. By the end of this book, you'll be able to create enterprise apps using the powerful features of .NET

5 and deploy them on the cloud. What you will learn Design enterprise apps by making the most of the latest features of .NET 5 Discover di?erent layers of an app, such as the data layer, API layer, and web layer Explore end-to-end architecture, implement an enterprise web app using .NET and C# 9, and deploy the app on Azure Focus on the core concepts of web application development such as dependency injection, caching, logging, con?guration, and authentication, and implement them in .NET 5 Integrate the new .NET 5 health and performance check APIs with your app Understand how .NET 5 works and contribute to the .NET 5 platform Who this book is for If you are a developer, architect, or senior programmer who wants to leverage the features of .NET 5 and the C# language, as well as grasp essential techniques to build your skills, then this C# .NET 5 book is for you. Beginner to intermediate-level knowledge of the .NET framework and C# programming is required to understand the concepts covered in this book more effectively.

Take your C++ coding to the next level by leveraging the latest features and advanced techniques to building high performing, reliable applications. About This Book Get acquainted with the latest features in C++ 17 Take advantage of the myriad of features and possibilities that C++ offers to build real-world applications Write clear and expressive code in C++, and get insights into how to keep your code error-free Who This Book Is For This book is for experienced C++ developers. If you are a novice C++ developer, then it's highly recommended that you get a solid understanding of the C++ language before reading this book What You Will Learn Write modular C++ applications in terms of the existing and newly introduced features Identify code-smells, clean up, and refactor legacy C++ applications Leverage the possibilities provided by Cucumber and Google Test/Mock to automate test cases Test frameworks with C++ Get acquainted with the new C++17 features Develop GUI applications in C++ Build portable cross-platform applications using standard C++ features In Detail C++ has come a long way and has now been adopted in several contexts. Its key strengths are its software infrastructure and resource-constrained applications. The C++ 17 release will change the way developers write code, and this book will help you master your developing skills with C++. With real-world, practical examples explaining each concept, the book will begin by introducing you to the latest features in C++ 17. It encourages clean code practices in C++ in general, and demonstrates the GUI app-development options in C++. You'll get tips on avoiding memory leaks using smart-pointers. Next, you'll see how multi-threaded programming can help you achieve concurrency in your applications. Moving on, you'll get an in-depth understanding of the C++ Standard Template Library. We show you the concepts of implementing TDD and BDD in your C++ programs, and explore template-based generic programming, giving you the expertise to build powerful applications. Finally, we'll round up with debugging techniques and best practices.By the end of the book, you'll have an in-depth understanding of the language and its various facets. Style and approach This straightforward guide will help you level up your skills in C++ programming, be it for enterprise software or for low-latency applications like games. Filled with real-world, practical examples, this book will take you gradually up the steep learning curve that is C++.

Another day without Test-Driven Development means more time wasted chasing bugs and watching your code deteriorate. You thought TDD was for someone else, but it's not! It's for you, the embedded C programmer. TDD helps you prevent defects and build software with a long useful life. This is the first book to teach the hows and whys of TDD for C programmers. TDD is a modern programming practice C developers need to know. It's a different way to program---unit tests are written in a tight feedback loop with the production code, assuring your code does what you think. You get valuable feedback every few minutes. You find mistakes before they become bugs. You get early warning of design problems. You get immediate notification of side effect defects. You get to spend more time adding valuable features to your product. James is one of the few experts in applying TDD to embedded C. With his 1.5 decades of training,coaching, and practicing TDD in C, C++, Java, and C# he will lead you from being a novice in TDD to using the techniques that few have mastered. This book is full of code written for embedded C programmers. You don't just see the end product, you see code and tests evolve. James leads you through the thought process and decisions made each step of the way. You'll learn techniques for test-driving code right nextto the hardware, and you'll learn design principles and how to apply them to C to keep your code clean and flexible. To run the examples in this book, you will need a C/C++ development environment on your machine, and the GNU GCC tool chain or Microsoft Visual Studio for C++ (some project conversion may be needed).
With the award-winning book Agile Software Development: Principles, Patterns, and Practices, Robert C. Martin helped bring Agile principles to tens of thousands of Java and C++ programmers. Now .NET programmers have a definitive guide to agile methods with this completely updated volume from Robert C. Martin and Micah Martin, Agile Principles, Patterns, and Practices in C#. This book presents a series of case studies illustrating the fundamentals of Agile development and Agile design, and moves quickly from UML models to real C# code. The introductory chapters lay out the basics of the agile movement, while the later chapters show proven techniques in action. The book includes many source code examples that are also available for download from the authors' Web site. Readers will come away from this book understanding Agile principles, and the fourteen practices of Extreme Programming Spiking, splitting, velocity, and planning iterations and releases Test-driven development, test-first design, and acceptance testing Refactoring with unit testing Pair programming Agile design and design smells The five types of UML diagrams and how to use them effectively Object-oriented package design and design patterns How to put all of it together for a real-world project Whether you are a C# programmer or a Visual Basic or Java programmer learning C#, a software development manager, or a business analyst, Agile Principles, Patterns, and Practices in C# is the first book you should read to understand agile software and how it applies to programming in the .NET Framework.
A .NET developer's guide to crafting robust, maintainable, and flexible web apps by leveraging C# 9 and .NET 5 features and component-scale and application-scale design patterns Key Features Apply software design patterns effectively, starting small and progressing to cloud-scale Discover modern application architectures such as vertical slice, clean architecture, and event-driven microservices Explore ASP.NET design patterns, from options to full-stack web development using Blazor Book

Description Design patterns are a set of solutions to many of the common problems occurring in software development. Knowledge of these design patterns helps developers and professionals to craft software solutions of any scale. ASP.NET Core 5 Design Patterns starts by exploring basic design patterns, architectural principles, dependency injection, and other ASP.NET Core mechanisms. You'll explore the component scale as you discover patterns oriented toward small chunks of the software, and then move to application-scale patterns and techniques to understand higher-level patterns and how to structure the application as a whole. The book covers a range of significant GoF (Gangs of Four) design patterns such as strategy, singleton, decorator, facade, and composite. The chapters are organized based on scale and topics, allowing you to start small and build on a strong base, the same way that you would develop a program. With the help of use cases, the book will show you how to combine design patterns to display alternate usage and help you feel comfortable working with a variety of design patterns. Finally, you'll advance to the client side to connect the dots and make ASP.NET Core a viable full-stack alternative. By the end of the book, you'll be able to mix and match design patterns and have learned how to think about architecture and how it works. What You Will Learn Apply the SOLID principles for building flexible and maintainable software Get to grips with .NET 5 dependency injection Work with GoF design patterns such as strategy, decorator, and composite Explore the MVC patterns for designing web APIs and web applications using Razor Discover layering techniques and tenets of clean architecture Become familiar with CQRS and vertical slice architecture as an alternative to layering Understand microservices, what they are, and what they are not Build ASP.NET UI from server-side to client-side Blazor Who this book is for ?This design patterns book is for beginners as well as intermediate-level software and web developers with some knowledge of .NET who want to write flexible, maintainable, and robust code for building scalable web applications. Knowledge of C# programming and an understanding of web concepts like HTTP is necessary.
Adhering to certain layout and grids standards and principles is important for any job from brochures, to annual reports, to posters, to websites, to publications. However, knowing how to bend the rules and make certain grids work for the job at hand takes skill. This book outlines and demonstrates basic layout/grid guidelines and rules through 100 entries including choosing a typeface, striving for rhythm and balance with type, combining typefaces, using special characters and kerning and legibility. These essentials of grid design are critical to the success of any job.
Provides information on analyzing, designing, and writing object-oriented software.
Unleash the true power of JavaScript by mastering Object-Oriented programming principles and patterns About This Book Covering all the new Object-Oriented features introduced in ES6, this book shows you how to build large-scale web apps Build apps that promote scalability, maintainability, and reusability Learn popular Object-Oriented programming (OOP) principles and design patterns to build robust apps Implement Object-Oriented concepts in a wide range of front-end architectures Who This Book Is For This book is ideal for you if you are a JavaScript developers who wants to gain expertise in OOP with JavaScript to improve your web development skills and build professional quality web applications. What You Will Learn Master JavaScript's OOP features, including the one's provided by ES6 specification Identify and apply the most

common design patterns such as Singleton, Factory, Observer, Model-View-Controller, and Mediator Patterns Understand the SOLID principles and their benefits Use the acquired OOP knowledge to build robust and maintainable code Design applications using a modular architecture based on SOLID principles In Detail ECMAScript 6 introduces several new Object-Oriented features that drastically change the way developers structure their projects. Web developers now have some advanced OOP functionality at their disposal to build large-scale applications in JavaScript. With this book, we'll provide you with a comprehensive overview of OOP principles in JavaScript and how they can be implemented to build sophisticated web applications. Kicking off with a subtle refresher on objects, we'll show you how easy it is to define objects with the new ES6 classes. From there, we'll fly you through some essential OOP principles, forming a base for you to get hands-on with encapsulation. You'll get to work with the different methods of inheritance and we'll show you how to avoid using inheritance with Duck Typing. From there, we'll move on to some advanced patterns for object creation and you'll get a strong idea of how to use interesting patterns to present data to users and to bind data. We'll use the famous promises to work with asynchronous processes and will give you some tips on how to organize your code effectively. You'll find out how to create robust code using SOLID principles and finally, we'll show you how to clearly define the goals of your application architecture to get better, smarter, and more effective coding. This book is your one-way ticket to becoming a JavaScript Jedi who can be counted on to deliver flexible and maintainable code. Style and approach This comprehensive guide on advanced OOP principles and patterns in JavaScript is packed with real-world use cases, and shows you how to implement advanced OOP features to build sophisticated web applications that promote scalability and reusability. Learn everything you need to know about object-oriented programming with the latest features of Kotlin 1.3 Key Features A practical guide to understand objects and classes in Kotlin Learn to write asynchronous, non-blocking codes with Kotlin coroutines Explore Encapsulation, Inheritance, Polymorphism, and Abstraction in Kotlin Book Description Kotlin is an object-oriented programming language. The book is based on the latest version of Kotlin. The book provides you with a thorough understanding of programming concepts, object-oriented programming techniques, and design patterns. It includes numerous examples, explanation of concepts and keynotes. Where possible, examples and programming exercises are included. The main purpose of the book is to provide a comprehensive coverage of Kotlin features such as classes, data classes, and inheritance. It also provides a good understanding of design pattern and how Kotlin syntax works with object-oriented techniques. You will also gain familiarity with syntax in this book by writing labeled for loop and when as an expression. An introduction to the advanced concepts such as sealed classes and package level functions and coroutines is provided and we will also learn how these concepts can make the software development easy. Supported libraries for serialization, regular expression and testing are also covered in this book. By the end of the book, you would have learnt building robust and maintainable software with object oriented design patterns in Kotlin. What you will learn Get an overview of the Kotlin programming language Discover Object-oriented programming techniques in Kotlin Understand Object-oriented design patterns Uncover multithreading by Kotlin way Understand about arrays and collections Understand the importance of object-oriented design patterns Understand about

exception handling and testing in OOP with Kotlin Who this book is for This book is for programmers and developers who wish to learn Object-oriented programming principles and apply them to build robust and scalable applications. Basic knowledge in Kotlin programming is assumed

This book teaches you all the essential knowledge required to learn and apply time-proven SOLID principles of object-oriented design and important design patterns in ASP.NET Core 1.0 (formerly ASP.NET 5) applications. You will learn to write server-side as well as client-side code that makes use of proven practices and patterns. SOLID is an acronym popularized by Robert Martin used to describe five basic principles of good object-oriented design--Single Responsibility, Open/Closed, Liskov Substitution, Interface Segregation and Dependency Inversion. This book covers all five principles and illustrates how they can be used in ASP.NET Core 1.0 applications. Design Patterns are time proven solutions to commonly occurring software design problems. The most well-known catalog of design patterns comes from Erich Gamma, Richard Helm, Ralph Johnson and John Vlissides, the so-called as GoF patterns (Gang of Four patterns). This book contains detailed descriptions of how to apply Creational, Structural and Behavioral GoF design patterns along with some Patterns of Enterprise Application Architecture. Popular JavaScript patterns are covered, along with working examples of all these patterns in ASP.NET Core 1.0 and C# are included. What You Will Learn: How to apply SOLID principles to ASP.NET applications How to use Gang of Four (GoF) design patterns in ASP.NET applications Techniques for applying Patterns of Enterprise Application Architecture cataloged by Martin Fowler in ASP.NET applications How to organize code and apply design patterns in JavaScript Who This Book Is For:This book is for ASP.NET developers familiar with ASP.NET Core 1.0, C# and Visual Studio.

The Complete Guide to Writing More Maintainable, Manageable, Pleasing, and Powerful Ruby Applications Ruby's widely admired ease of use has a downside: Too many Ruby and Rails applications have been created without concern for their long-term maintenance or evolution. The Web is awash in Ruby code that is now virtually impossible to change or extend. This text helps you solve that problem by using powerful real-world object-oriented design techniques, which it thoroughly explains using simple and practical Ruby examples. Sandi Metz has distilled a lifetime of conversations and presentations about object-oriented design into a set of Ruby-focused practices for crafting manageable, extensible, and pleasing code. She shows you how to build new applications that can survive success and repair existing applications that have become impossible to change. Each technique is illustrated with extended examples, all downloadable from the companion Web site,poodr.info. The first title to focus squarely on object-oriented Ruby application design, Practical Object-Oriented Design in Ruby will guide you to superior outcomes, whatever your previous Ruby experience. Novice Ruby programmers will find specific rules to live by; intermediate Ruby programmers

will find valuable principles they can flexibly interpret and apply; and advanced Ruby programmers will find a common language they can use to lead development and guide their colleagues. This guide will help you Understand how object-oriented programming can help you craft Ruby code that is easier to maintain and upgrade Decide what belongs in a single Ruby class Avoid entangling objects that should be kept separate Define flexible interfaces among objects Reduce programming overhead costs with duck typing Successfully apply inheritance Build objects via composition Design cost-effective tests Solve common problems associated with poorly designed Ruby code

This second edition of The Principles of Beautiful Web Design is the ideal book for people who can build websites, but are seeking the skills and knowledge to visually enhance their sites. This book will teach you how to: Understand the process of what makes "good design," from discovery through to implementation Use color effectively, develop color schemes, and create a palette Create pleasing layouts using grids, the rule of thirds, and symmetry Employ textures: lines, points, shapes, volumes, and depth Apply typography to make ordinary designs look great Choose, edit, and position effective imagery And lots more... This revised, easy-to-follow guide is illustrated with beautiful, full-color examples, and leads readers through the process of creating great designs from start to finish. It also features: Updated information about grid-based design How to design for mobile resolutions Information about the future of web fonts including @font-face Common user-interface patterns and resources

Design patterns are time-tested solutions to recurring problems, letting the designer build programs on solutions that have already proved effective Provides developers with more than a dozen ASP.NET examples showing standard design patterns and how using them helpsbuild a richer understanding of ASP.NET architecture, as well as better ASP.NET applications Builds a solid understanding of ASP.NET architecture that can be used over and over again in many projects Covers ASP.NET code to implement many standard patterns including Model-View-Controller (MVC), ETL, Master-Master Snapshot, Master-Slave-Snapshot, Façade, Singleton, Factory, Single Access Point, Roles, Limited View, observer, page controller, common communication patterns, and more

This comprehensive, pragmatic tutorial on Agile Development and eXtreme programming, written by one of the founding fathers of Agile Development: Teaches software developers and project managers how to get projects done on time, and on budget using the power of Agile Development; Uses real-world case studies to show how to of plan, test, refactor, and pair program using eXtreme programming; Contains a wealth of reusable C++ and Java code; Focuses on solving customer oriented systems problems using UML and Design Patterns.

A surprisingly simple way for students to master any subject--based on one of the world's most popular online courses and the bestselling book A Mind for Numbers A Mind for Numbers and its wildly popular online companion course "Learning How to Learn" have empowered more than two million learners of all

ages from around the world to master subjects that they once struggled with. Fans often wish they'd discovered these learning strategies earlier and ask how they can help their kids master these skills as well. Now in this new book for kids and teens, the authors reveal how to make the most of time spent studying. We all have the tools to learn what might not seem to come naturally to us at first--the secret is to understand how the brain works so we can unlock its power. This book explains: • Why sometimes letting your mind wander is an important part of the learning process • How to avoid "rut think" in order to think outside the box • Why having a poor memory can be a good thing • The value of metaphors in developing understanding • A simple, yet powerful, way to stop procrastinating Filled with illustrations, application questions, and exercises, this book makes learning easy and fun.

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.

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

A cross-disciplinary reference of design. Pairs common design concepts with examples that illustrate them in practice.

Boost your development efficiency by learning about design patterns in TypeScript About This Book This step-by-step guide will would demonstrate all the important design patterns in practice This book is the only documentation on the market focusing on design patterns in TypeScript This book is packed with rich examples that will improve your efficiency and encourage code reuse Who This Book Is For If you are a TypeScript developer, this book is for you. No knowledge of design patterns is required to read this book. What You Will Learn Understand the challenges and implications of developing an enterprise application Install and configure the necessary tools in order to start developing an application Identify the challenges when developing an application Apply GoF patterns in an application with a testing approach Use and utilize design patterns while developing a TypeScript application or during JavaScript application development Reference to SOLID principles and what their benefits do to your projects Apply various principles in a TypeScript application Improve code quality and development speed In Detail In programming, there are several problems that occur frequently. To solve these problems, there are various repeatable solutions that are known as design patterns. Design patterns are a great way to improve the efficiency of your programs and improve your productivity. This book is a collection of the most important patterns you need to improve your applications' performance and your productivity. The journey starts by explaining the current challenges when designing and developing an application and how you can solve these challenges by applying the correct design pattern and best practices. Each pattern is accompanied with rich examples that demonstrate the power of patterns for a range of tasks, from building an application to code testing. We'll introduce low-level programming concepts to help you write TypeScript code, as well as work with software architecture, best practices, and design aspects. Style and approach In this book, design patterns are explained in a step-by-step manner. All the major patterns covered will improve your understanding of TypeScript and the patterns associated with TypeScript.

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, Asyncronous 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!

Write code that can adapt to changes. By applying this book's principles, you can create code that accommodates new requirements and unforeseen scenarios without significant rewrites. Gary McLean Hall describes Agile best practices, principles, and patterns for designing and writing code that can evolve more quickly and easily, with fewer errors, because it doesn't impede change. Now revised, updated, and expanded, Adaptive Code, Second Edition adds indispensable practical insights on Kanban, dependency inversion, and creating reusable abstractions. Drawing on over a decade of Agile consulting and development experience, McLean Hall has updated his best-seller with deeper coverage of unit testing, refactoring, pure dependency injection, and more. Master powerful new ways to: • Write code that enables and complements Scrum, Kanban, or any other Agile framework • Develop code that can survive major changes in requirements • Plan for adaptability by using dependencies, layering, interfaces, and design patterns • Perform unit testing and refactoring in tandem, gaining more value from both • Use the "golden master" technique to make legacy code adaptive • Build SOLID code with single-responsibility, open/closed, and Liskov substitution principles • Create smaller interfaces to support more-diverse client and architectural needs • Leverage dependency injection best practices to improve code adaptability • Apply dependency inversion with the Stairway pattern, and avoid related anti-patterns About You This book is for programmers of all skill levels seeking more-practical insight into design patterns, SOLID principles, unit testing, refactoring, and related topics. Most readers will have programmed in C#, Java, C++, or similar object-oriented languages, and will be familiar with core procedural programming techniques. Object orientation is a lie. Reusable, flexible components have failed. The SOLID Principles of Object-Oriented Design still cling to these lies, sending developers down so many wrong paths. In less than 70 pages, this book presents five broadsides against each principle, tracing their history, demonstrating their flaws,

and taking their advice to an hilarious degree all to prove a point: you can build good software by focusing on the problem at hand, and discussing the code you're writing, not some nebulous set of principles.

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. Explore various dependency injection methods in Go such as monkey patching, constructor injection, and method injection Key Features Learn to evaluate Code UX and make it better Explore SOLID principles and understand how they relate to dependency injection Use Google's wire framework to simplify dependence management Book Description Hands-On Dependency Injection in Go takes you on a journey, teaching you about refactoring existing code to adopt dependency injection (DI) using various methods available in Go. Of the six methods introduced in this book, some are conventional, such as constructor or method injection, and some unconventional, such as just-in-time or config injection. Each method is explained in detail, focusing on their strengths and weaknesses, and is followed with a step-by-step example of how to apply it. With plenty of examples, you will learn how to leverage DI to transform code into something simple and flexible. You will also discover how to generate and leverage the dependency graph to spot and eliminate issues. Throughout the book, you will learn to leverage DI in combination with test stubs and mocks to test otherwise tricky or impossible scenarios. Hands-On Dependency Injection in Go takes a pragmatic approach and focuses heavily on the code, user experience, and how to achieve long-term benefits through incremental changes. By the end of this book, you will have produced clean code that's easy to test. What you will learn Understand the benefits of DI Explore SOLID design principles and how they relate to Go Analyze various dependency injection patterns available in Go Leverage DI to produce high-quality, loosely coupled Go code Refactor existing Go code to adopt DI Discover tools to improve your code's testability and test coverage Generate and interpret Go dependency graphs Who this book is for Hands-On Dependency Injection in Go is for programmers with a few year s experience in any language and a basic understanding of Go. If you wish to produce clean, loosely coupled code that is inherently easier to test, this book is for you.

The Complete Coding Interview Guide in Java is an all-inclusive solution guide with meticulously crafted questions and answers that will help you crack any Java Developer job. This book will help you build a strong foundation and the skill-set required to confidently appear in the toughest coding interviews.

Create various design patterns to master the art of solving problems using Java Key Features This book demonstrates the shift from OOP to functional programming and covers reactive and functional patterns in a clear and step-by-step manner All the design patterns come with a practical use case as part of the explanation, which will improve your productivity Tackle all kinds of performance-related issues and streamline

your development Book Description Having a knowledge of design patterns enables you, as a developer, to improve your code base, promote code reuse, and make the architecture more robust. As languages evolve, new features take time to fully understand before they are adopted en masse. The mission of this book is to ease the adoption of the latest trends and provide good practices for programmers. We focus on showing you the practical aspects of smarter coding in Java. We'll start off by going over object-oriented (OOP) and functional programming (FP) paradigms, moving on to describe the most frequently used design patterns in their classical format and explain how Java's functional programming features are changing them. You will learn to enhance implementations by mixing OOP and FP, and finally get to know about the reactive programming model, where FP and OOP are used in conjunction with a view to writing better code. Gradually, the book will show you the latest trends in architecture, moving from MVC to microservices and serverless architecture. We will finish off by highlighting the new Java features and best practices. By the end of the book, you will be able to efficiently address common problems faced while developing applications and be comfortable working on scalable and maintainable projects of any size. What you will learn Understand the OOP and FP paradigms Explore the traditional Java design patterns Get to know the new functional features of Java See how design patterns are changed and affected by the new features Discover what reactive programming is and why is it the natural augmentation of FP Work with reactive design patterns and find the best ways to solve common problems using them See the latest trends in architecture and the shift from MVC to serverless applications Use best practices when working with the new features Who this book is for This book is for those who are familiar with Java development and want to be in the driver's seat when it comes to modern development techniques. Basic OOP Java programming experience and elementary familiarity with Java is expected.

There is always room for improving one's coding ability, and SOLID design principles offer one way to see marked improvements in final output. With SOLID Principles Succinctly, author Gaurav Kumar Arora will instruct you in how to use SOLID principles to take your programming skills to the next level.

Harness the power of Apex design patterns to build robust and scalable code architectures on the Force.com platform About This Book Apply Creational, Structural and behavioural patterns in Apex to fix governor limit issues. Have a grasp of the anti patterns to be taken care in Apex which could have adverse effect on the application. The authors, Jitendra Zaa is a salesforce MVP and Anshul Verma has 12+ years of experience in the area of application development. Who This Book Is For If you are a competent developer with working knowledge of Apex, and now want to deep dive into the world of Apex design patterns to optimize the application performance, then this book is for you. Prior knowledge of Salesforce and Force.com platform is recommended. What You Will Learn Apply OOPs principal in Apex to design a robust and efficient solution to address various facets to a business problem Get to grips with the benefits and applicability of using different design patterns in Apex Solve problems while instantiating, structuring and giving dynamic behavior to Apex classes Understand the implementation of creational, structural, behavioral, concurrency and anti-patterns in your application Follow the Apex best practices to resolve governor limit issues Get clued up about the Inheritance, abstract classes, polymorphism in Apex to deal with the

object mechanism Master various design patterns and determine the best out of them Explore the anti patterns that could not be applied to Apex and their appropriate solutions In Detail Apex is an on-demand programming language providing a complete set of features for building business applications – including data models and objects to manage data. Apex being a proprietor programming language from Salesforce to be worked with multi tenant environment is a lot different than traditional OOPs languages like Java and C#. It acts as a workflow engine for managing collaboration of the data between users, a user interface model to handle forms and other interactions, and a SOAP API for programmatic access and integration. Apex Design Patterns gives you an insight to several problematic situations that can arise while developing on Force.com platform and the usage of Design patterns to solve them. Packed with real life examples, it gives you a walkthrough from learning design patterns that Apex can offer us, to implementing the appropriate ones in your own application. Furthermore, we learn about the creational patterns that deal with object creation mechanism and structural patterns that helps to identify the relationship between entities. Also, the behavioural and concurrency patterns are put forward explaining the communication between objects and multi-threaded programming paradigm respectively. We later on, deal with the issues regarding structuring of classes, instantiating or how to give a dynamic behaviour at a runtime, with the help of anti-patterns. We learn the basic OOPs principal in polymorphic and modular way to enhance its capability. Also, best practices of writing Apex code are explained to differentiate between the implementation of appropriate patterns. This book will also explain some unique patterns that could be applied to get around governor limits. By the end of this book, you will be a maestro in developing your applications on Force.com for Salesforce Style and approach This book is a step-by-step guide, complete with well-tested programs and real world situations to solve your common occurring problems in Apex design by using the anti-patterns. It gets crackling from exploring every appropriate solution to comparing the best one as per OOps principal.

Practical Software Architecture Solutions from the Legendary Robert C. Martin ("Uncle Bob") By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin ("Uncle Bob") reveals those rules and helps you apply them. Martin's Clean Architecture doesn't merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you'll face–the ones that will make or break your projects. Learn what software architects need to achieve–and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what's critically important and what's merely a "detail" Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean

Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager–and for every programmer who must execute someone else's designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available. Apply design principles to your classes, preparing them for reuse. You will use package design principles to create packages that are just right in terms of cohesion and coupling, and are user- and maintainer-friendly at the same time. The first part of this book walks you through the five SOLID principles that will help you improve the design of your classes. The second part introduces you to the best practices of package design, and covers both package cohesion principles and package coupling principles. Cohesion principles show you which classes should be put together in a package, when to split packages, and if a combination of classes may be considered a "package" in the first place. Package coupling principles help you choose the right dependencies and prevent wrong directions in the dependency graph of your packages. What You'll Learn Apply the SOLID principles of class design Determine if classes belong in the same package Know whether it is safe for packages to depend on each other Who This Book Is For Software developers with a broad range of experience in the field, who are looking for ways to reuse,share, and distribute their code 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. Get best-in-class engineering practices to help you write more-robust, bug-free code. Two Microsoft .NET development experts share real-world examples and proven methods for optimizing the software development life cycle—from avoiding costly programming pitfalls to making your development team more efficient. Managed code developers at all levels will find design, prototyping, implementation, debugging, and testing tips to boost the quality of their code—today. Optimize each stage of the development process—from design to testing—and produce higher-quality applications. Use metaprogramming to reduce code complexity, while increasing flexibility and maintainability Treat performance as a feature—and manage it throughout the development life cycle Apply best practices for application scalability Employ preventative security measures to ward off malicious attacks Practice defensive programming to catch bugs before run time Incorporate automated builds, code analysis, and testing into the daily engineering process Implement better source-control management and check-in procedures Establish a quality-driven, milestone-based project rhythm—and improve your results!
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