

Dependency Injection In Net Mark Seemann

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Pro Asynchronous Programming with .NET Richard Blewett 2014-01-22 Pro Asynchronous Programming with .NET teaches the essential skill of asynchronous programming in .NET. It answers critical questions in .NET application development, such as: how do I keep my program responding at all times to keep my users happy? how do I make the most of the available hardware? how can I improve performance? In the modern world, users expect more and more from their applications and devices, and multi-core hardware has the potential to provide it. But it takes carefully crafted code to turn that potential into responsive, scalable applications. With Pro Asynchronous Programming with .NET you will: Meet the underlying model for asynchrony on Windows—threads. Learn how to perform long blocking operations away from your UI thread to keep your UI responsive, then weave the results back in as seamlessly as possible. Master the async/await model of asynchrony in .NET, which makes asynchronous programming simpler and more achievable than ever before. Solve common problems in parallel programming with modern async techniques. Get under the hood of your asynchronous code with debugging techniques and insights from Visual Studio and beyond. In the past asynchronous programming was seen as an advanced skill. It's now a must for all modern developers. Pro Asynchronous Programming with .NET is your practical guide to using this important programming skill anywhere on the .NET platform.

The .NET Developer's Guide to Directory Services Programming Joe Kaplan 2006-05-08 “If you have any interest in writing .NET programs using Active Directory or ADAM, this is the book you want to read.” —Joe Richards, Microsoft MVP, directory services Identity and Access Management are rapidly gaining importance as key areas of practice in the IT industry, and directory services provide the fundamental building blocks that enable them. For enterprise developers struggling to build directory-enabled .NET applications, The .NET Developer's Guide to Directory Services Programming will come as a welcome aid. Microsoft MVPs Joe Kaplan and Ryan Dunn have written a practical introduction to programming directory services, using both versions 1.1 and 2.0 of the .NET Framework. The extensive examples in the book are in C#; a companion Web site includes both C# and Visual Basic source code and examples. Readers will Learn to create, rename, update, and delete objects in Active Directory and ADAM Learn to bind to and search directories effectively and efficiently Learn to read and write attributes of all types in the directory Learn to use directory services within ASP.NET applications Get concrete examples of common programming tasks such as managing Active Directory and ADAM users and groups, and performing authentication Experienced .NET developers—those building enterprise applications or simply interested in learning about directory services—will find that The .NET Developer's Guide to Directory Services Programming unravels the complexities and helps them to avoid the common pitfalls that developers face.

Framework Design Guidelines Krzysztof Cwalina 2008-10-22 This is the eBook version of the print title,

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Framework Design Guidelines, Second Edition . Access to all the samples, applications, and content on the DVD is available through the product catalog page www.informit.com/title/9780321545619 Navigate to the “Downloads” tab and click on the “DVD Contents” links - see instructions in back pages of your eBook. Framework Design Guidelines, Second Edition, teaches developers the best practices for designing reusable libraries for the Microsoft .NET Framework. Expanded and updated for .NET 3.5, this new edition focuses on the design issues that directly affect the programmability of a class library, specifically its publicly accessible APIs. This book can improve the work of any .NET developer producing code that other developers will use. It includes copious annotations to the guidelines by thirty-five prominent architects and practitioners of the .NET Framework, providing a lively discussion of the reasons for the guidelines as well as examples of when to break those guidelines. Microsoft architects Krzysztof Cwalina and Brad Abrams teach framework design from the top down. From their significant combined experience and deep insight, you will learn The general philosophy and fundamental principles of framework design Naming guidelines for the various parts of a framework Guidelines for the design and extending of types and members of types Issues affecting—and guidelines for ensuring—extensibility How (and how not) to design exceptions Guidelines for—and examples of—common framework design patterns Guidelines in this book are presented in four major forms: Do, Consider, Avoid, and Do not. These directives help focus attention on practices that should always be used, those that should generally be used, those that should rarely be used, and those that should never be used. Every guideline includes a discussion of its applicability, and most include a code example to help illuminate the dialogue. Framework Design Guidelines, Second Edition, is the only definitive source of best practices for managed code API development, direct from the architects themselves. A companion DVD includes the Designing .NET Class Libraries video series, instructional presentations by the authors on design guidelines for developing classes and components that extend the .NET Framework. A sample API specification and other useful resources and tools are also included.

Java 9 Dependency Injection Nilang Patel 2018-04-26 Create clean code with Dependency Injection principles Key Features Use DI to make your code loosely coupled to manage and test your applications easily on Spring 5 and Google Guice Learn the best practices and methodologies to implement DI Write more maintainable Java code by decoupling your objects from their implementations Book Description Dependency Injection (DI) is a design pattern that allows us to remove the hard-coded dependencies and make our application loosely coupled, extendable, and maintainable. We can implement DI to move the dependency resolution from compile-time to runtime. This book will be your one stop guide to write loosely coupled code using the latest features of Java 9 with frameworks such as Spring 5 and Google Guice. We begin by explaining what DI is and teaching you about IoC containers. Then you'll learn about object compositions and their role in DI. You'll find out how to build a modular application and learn how to use DI to focus your efforts on the business logic unique to your application and let the framework handle the infrastructure work to put it all together. Moving on, you'll gain knowledge of Java 9's new features and modular framework and how DI works in Java 9. Next, we'll explore Spring and Guice, the popular frameworks for DI. You'll see how to define injection keys and configure them at the framework-specific level. After that, you'll find out about the different types of scopes available in both popular frameworks. You'll see how to manage dependency of cross-cutting concerns while writing applications through aspect-oriented programming. Towards the end, you'll learn to integrate any third-party library in your DI-enabled application and explore common pitfalls and recommendations to build a solid application with the help of best practices, patterns, and anti-patterns in DI. What you will learn Understand the benefits of DI and fo from a tightly coupled design to a cleaner design organized around dependencies See Java 9's new features and modular framework Set up Guice and Spring in an application so that it can be used for DI Write integration tests for DI applications Use scopes to handle complex application scenarios Integrate any third-party library in your DI-enabled application Implement

Aspect-Oriented Programming to handle common cross-cutting concerns such as logging, authentication, and transactions Understand IoC patterns and anti-patterns in DI Who this book is for This book is for Java developers who would like to implement DI in their application. Prior knowledge of the Spring and Guice frameworks and Java programming is assumed.

Functional Concurrency in .NET Riccardo Terrell 2018 Functional languages help developers support concurrency by encouraging immutable data structures that can be passed between threads without having to worry about a shared state, all while avoiding side effects. Concurrency in .NET teaches readers how to build concurrent and scalable programs in .NET using the functional paradigm. This intermediate-level guide is aimed at developers, architects, and passionate computer programmers. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

xUnit Test Patterns Gerard Meszaros 2007-05-21 Automated testing is a cornerstone of agile development. An effective testing strategy will deliver new functionality more aggressively, accelerate user feedback, and improve quality. However, for many developers, creating effective automated tests is a unique and unfamiliar challenge. xUnit Test Patterns is the definitive guide to writing automated tests using xUnit, the most popular unit testing framework in use today. Agile coach and test automation expert Gerard Meszaros describes 68 proven patterns for making tests easier to write, understand, and maintain. He then shows you how to make them more robust and repeatable--and far more cost-effective. Loaded with information, this book feels like three books in one. The first part is a detailed tutorial on test automation that covers everything from test strategy to in-depth test coding. The second part, a catalog of 18 frequently encountered "test smells," provides trouble-shooting guidelines to help you determine the root cause of problems and the most applicable patterns. The third part contains detailed descriptions of each pattern, including refactoring instructions illustrated by extensive code samples in multiple programming languages.

Real-World Functional Programming Tomas Petricek 2009-11-30 Functional programming languages like F#, Erlang, and Scala are attracting attention as an efficient way to handle the new requirements for programming multi-processor and high-availability applications. Microsoft's new F# is a true functional language and C# uses functional language features for LINQ and other recent advances. Real-World Functional Programming is a unique tutorial that explores the functional programming model through the F# and C# languages. The clearly presented ideas and examples teach readers how functional programming differs from other approaches. It explains how ideas look in F#--a functional language--as well as how they can be successfully used to solve programming problems in C#. Readers build on what they know about .NET and learn where a functional approach makes the most sense and how to apply it effectively in those cases. The reader should have a good working knowledge of C#. No prior exposure to F# or functional programming is required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

Programming ASP.NET Core, Programming ASP.NET Core Dino Esposito 2018-05-10 The complete, pragmatic guide to building high-value solutions with ASP.NET Core Programming ASP.NET Core is the definitive guide to practical web-based application development with Microsoft's new ASP.NET Core framework. Microsoft MVP Dino Esposito introduces proven techniques and well-crafted example code for solving real problems with ASP.NET Core. Step by step, he guides you through using all key ASP.NET Core technologies, including MVC for HTML generation, .NET Core, EF Core, ASP.NET Identity, dependency injection, and much more. Esposito thoroughly covers ASP.NET Core's cross-platform capabilities and what's changed from older ASP.NET versions, but he doesn't stop there: he offers a complete learning path for every developer who wants to build production solutions, including mobile-specific solutions.

Microsoft MVP Dino Esposito shows how to:

- Create new projects and understand their structure
- Set up and use the familiar MVC application model in ASP.NET Core
- Write controller class code to govern all stages of request processing
- Serve HTML from controllers, or directly via Razor Pages
- Master the Razor language for quickly defining the layout of HTML views
- Manage cross-cutting concerns such as global configuration data, error and exception handling, controller class design, and dependency injection
- Secure applications with user authentication and ASP.NET Core's policy-based user authorization API
- Design for efficient data access, and choose the right option for reading and writing data
- Build ASP.NET Core Web APIs that return JSON, XML, or other data
- Use data binding to programmatically update visual components with fresh information
- Build device-friendly web views for iOS and Android
- Explore the radically new ASP.NET Core runtime environment and Dependency Injection (DI) infrastructure

[.NET Core in Action](#) Dustin Metzgar 2018-07-12 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 profiling, 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

Advanced .NET Debugging Mario Hewardt 2009-11-09 "Mario Hewardt's *Advanced .NET Debugging* is an excellent resource for both beginner and experienced developers working with .NET. The book is also packed with many debugging tips and discussions of CLR internals, which will benefit developers architecting software." –Jeffrey Richter, consultant, trainer, and author at Wintellect "Mario has done it again. His *Advanced Windows Debugging* (coauthored with Daniel Pravat) is an invaluable resource for native code debugging, and *Advanced .NET Debugging* achieves the same quality, clarity, and breadth to make it just as invaluable for .NET debugging." –Mark Russinovich, Technical Fellow, Microsoft Corporation The Only Complete, Practical Guide to Fixing the Toughest .NET Bugs *Advanced .NET Debugging* is the first focused, pragmatic guide to tracking down today's most complex and challenging .NET application bugs. It is the only book to focus entirely on using powerful native debugging tools, including WinDBG, NTSD, and CDB, to debug .NET applications. Using these tools, author Mario Hewardt explains how to identify the real root causes of problems—far more quickly than you ever could with other debuggers. Hewardt first introduces the key concepts needed to successfully use .NET's native debuggers. Next, he turns to sophisticated debugging techniques, using real-world examples that demonstrate many common C# programming errors. This book enables you to Make practical use of

postmortem debugging, including PowerDBG and other “power tools” Understand the debugging details and implications of the new .NET CLR 4.0 Master and successfully use Debugging Tools for Windows, as well as SOS, SOSEX, CLR Profiler, and other powerful tools Gain a deeper, more practical understanding of CLR internals, such as examining thread-specific data, managed heap and garbage collector, interoperability layer, and .NET exceptions Solve difficult synchronization problems, managed heap problems, interoperability problems, and much more Generate and successfully analyze crash dumps A companion web site (advanceddotnetdebugging.com) contains all sample code, examples, and bonus content.

Learning C# 3.0 Jesse Liberty 2008-11-18 If you're new to C#, this popular book is the ideal way to get started. Completely revised for the latest version of the language, Learning C# 3.0 starts with the fundamentals and takes you through intermediate and advanced C# features -- including generics, interfaces, delegates, lambda expressions, and LINQ. You'll also learn how to build Windows applications and handle data with C#. No previous programming experience is required -- in fact, if you've never written a line of code in your life, bestselling authors Jesse Liberty and Brian MacDonald will show you how it's done. Each chapter offers a self-contained lesson to help you master key concepts, with plenty of annotated examples, illustrations, and a concise summary. With this book, you will: Learn how to program as you learn C# Grasp the principles of object-oriented programming through C# Discover how to use the latest features in C# 3.0 and the .NET 3.5 Framework--including LINQ and the Windows Presentation Foundation (WPF) Create Windows applications and data-driven applications You'll also find a unique Test Your Knowledge section in each chapter, with practical exercises and review quizzes, so you can practice new skills and test your understanding. If you're ready to dive into C# and .NET programming, this book is a great way to quickly get up to speed.

Dependency Injection Dhananjay Prasanna 2009-07-31 Dependency Injection is an in-depth guide to the current best practices for using the Dependency Injection pattern--the key concept in Spring and the rapidly-growing Google Guice. It explores Dependency Injection, sometimes called Inversion of Control, in fine detail with numerous practical examples. Developers will learn to apply important techniques, focusing on their strengths and limitations, with a particular emphasis on pitfalls, corner-cases, and best practices. This book is written for developers and architects who want to understand Dependency Injection and successfully leverage popular DI technologies such as Spring, Google Guice, PicoContainer, and many others. The book explores many small examples of anchor concepts and unfolds a larger example to show the big picture. Written primarily from a Java point-of-view, this book is appropriate for any developer with a working knowledge of object-oriented programming in Java, Ruby, or C#. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

Pro ASP.NET Core 3 Adam Freeman 2020-06-06 Now in its 8th edition, Pro ASP.NET Core has been thoroughly updated for ASP.NET Core 3 and online for ASP.NET Core 5 and .NET 5.0. This comprehensive, full-color guide is the only book you need to learn ASP.NET Core development. Professional developers get ready to produce leaner applications for the ASP.NET Core platform. This edition puts ASP.NET Core 3 into context, and takes a deep dive into the tools and techniques required to build modern, extensible web applications. New features and capabilities such as MVC 3, Razor Pages, Blazor Server, and Blazor WebAssembly are covered, along with demonstrations of how they can be applied in practice. Following the same popular format and style found in previous editions, author Adam Freeman explains how to get the most out of ASP.NET Core 3. Starting with the nuts-and-bolts topics, he teaches readers about middleware components, built-in services, request model binding, and more. Moving along, he introduces increasingly more complex topics and advanced features, including endpoint routing and dependency

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injection. Written for professionals wanting to incorporate the latest functionality of ASP.NET Core 3 into their projects, this book also serves as a complete reference on ASP.NET Core. Beginners with some background in Microsoft web development will also greatly benefit from the in-depth coverage provided throughout. What You Will Learn: Build a solid foundation and skill set for working with the entire ASP.NET Core platform Apply ASP.NET Core 3 and ASP.NET Core 5 features in your developer environment; plentiful reusable templates See how to create RESTful web services, web applications, and client-side applications Leverage existing knowledge to efficiently get up and running with new programming models Adam Freeman is an experienced IT professional who has held senior positions in a range of companies, most recently serving as chief technology officer and chief operating officer of a global bank. Now retired, he spends his time writing and long-distance running. "The Rolls-Royce of ASP.NET books, (or if you're American, the Cadillac). Very thorough!" Les Jackson, MCSD, DotNet Playbook "The author's instruction is direct, easy to understand and supplemented with clear code examples... Whether you are a beginner learning ASP.NET Core 3.1 app development, or an experienced professional ready to master advanced concepts, I consider this book a 'must have' for you!" Jeremy Likness, Senior Program Manager, Microsoft "...the best single resource for teaching MVC web apps using ASP.NET. " Charles Carter, MSCS, MSwE, JD, Cloud Application Development Instructor, Microsoft Software and Systems Academy

Essential C# 7.0 Mark Michaelis 2018-06-17 The Comprehensive, Expert Guide to C# Language Programming "This book has been a classic for years, and remains one of the most venerable and trusted titles in the world of C# content, and probably far beyond! . . . Mark is super smart, insists on understanding everything to the core, and has phenomenal insight into how things affect real developers. . . . He goes right to the essence and communicates with great integrity—no sugarcoating—and has a keen eye for practical value and real-world problems." –Mads Torgersen, C# Program Manager, Microsoft Essential C# 7.0 is a well-organized, no-fluff guide to C# 7.0 for programmers at all levels of experience. Reflecting the most important C# features from 3.0 through 7.0 and including modern programming patterns, it will help you write code that's simple, powerful, robust, secure, and maintainable. Author Mark Michaelis is a world-class C# expert: a long-time Microsoft MVP and Regional Director who also has served on Microsoft's C# design review team. He presents a comprehensive tutorial and reference for the entire language, including expert coverage of key C# 7.0 enhancements, C# 7.0's use with .NET Core/.NET Standard, and cross-platform compilation. He illustrates key C# constructs with succinct examples, and presents best-practice coding guidelines. To help you maintain existing code, separate indexes provide version-specific answers for C# 5.0, 6.0, and 7.0, and visual icons show when each language innovation was introduced. Make the most of C# 7.0 enhancements, including tuples, deconstructors, pattern matching, local functions, and ref returns Work efficiently with C# data types, operators, control flow, methods, and parameters Write more robust code with C# object-oriented constructs Implement reliable, effective exception handling Reduce code complexity with generics, delegates, lambda expressions, and events Leverage advanced dynamic and declarative programming techniques Query diverse data collections using LINQ with query expressions Create custom collections that operate against business objects Access .NET collections via collection interfaces and standard query operators Master multithreading and synchronization, including the async/await paradigm Optimize performance and interoperability with P/Invoke and unsafe code Run your code on Linux or macOS with C# 7.0 cross-platform compilation Includes C# 7.1, 7.2, and 7.3 language enhancements This guide offers you a complete foundation for successful development with modern versions of the C# language in any project or environment.

Agile Principles, Patterns, and Practices in C# Robert C. Martin 2006-07-20 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

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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.

Dependency Injection in .NET Mark Seemann 2011 "Dependency Injection in .NET" is a comprehensive guide that introduces DI to .NET developers. It covers core concepts and patterns, and introduces important DI frameworks, such as StructureMap, Windsor, and Spring.NET.

Domain Modeling Made Functional Scott Wlaschin 2018-01-25 You want increased customer satisfaction, faster development cycles, and less wasted work. Domain-driven design (DDD) combined with functional programming is the innovative combo that will get you there. In this pragmatic, down-to-earth guide, you'll see how applying the core principles of functional programming can result in software designs that model real-world requirements both elegantly and concisely - often more so than an object-oriented approach. Practical examples in the open-source F# functional language, and examples from familiar business domains, show you how to apply these techniques to build software that is business-focused, flexible, and high quality. Domain-driven design is a well-established approach to designing software that ensures that domain experts and developers work together effectively to create high-quality software. This book is the first to combine DDD with techniques from statically typed functional programming. This book is perfect for newcomers to DDD or functional programming - all the techniques you need will be introduced and explained. Model a complex domain accurately using the F# type system, creating compilable code that is also readable documentation---ensuring that the code and design never get out of sync. Encode business rules in the design so that you have "compile-time unit tests," and eliminate many potential bugs by making illegal states unrepresentable. Assemble a series of small, testable functions into a complete use case, and compose these individual scenarios into a large-scale design. Discover why the combination of functional programming and DDD leads naturally to service-oriented and hexagonal architectures. Finally, create a functional domain model that works with traditional databases, NoSQL, and event stores, and safely expose your domain via a website or API. Solve real problems by focusing on real-world requirements for your software. What You Need: The code in this book is designed to be run interactively on Windows, Mac and Linux. You will need a recent version of F# (4.0 or greater), and the appropriate .NET runtime for your platform. Full installation instructions for all platforms at fsharp.org.

Effective Python Brett Slatkin 2015 "It's easy to start writing code with Python: that's why the language is so immensely popular. However, Python has unique strengths, charms, and expressivity that can be hard to grasp at first -- as well as hidden pitfalls that can easily trip you up if you aren't aware of them. *Effective Python* will help you harness the full power of Python to write exceptionally robust, efficient, maintainable, and well-performing code. Utilizing the concise, scenario-driven style pioneered in Scott

Meyers's best-selling *Effective C++*, Brett Slatkin brings together 53 Python best practices, tips, shortcuts, and realistic code examples from expert programmers. Through realistic examples, Slatkin uncovers little-known Python quirks, intricacies, and idioms that powerfully impact code behavior and performance. You'll learn how to choose the most efficient and effective way to accomplish key tasks when multiple options exist, and how to write code that's easier to understand, maintain, and improve. Drawing on his deep understanding of Python's capabilities, Slatkin offers practical advice for each major area of development with both Python 3.x and Python 2.x. Coverage includes: * Algorithms * Objects * Concurrency * Collaboration * Built-in modules * Production techniques * And more Each section contains specific, actionable guidelines organized into items, each with carefully worded advice supported by detailed technical arguments and illuminating examples. Using *Effective Python*, you can systematically improve all the Python code you write: not by blindly following rules or mimicking incomprehensible idioms, but by gaining a deep understanding of the technical reasons why they make sense."--[Source inconnue].

Unit Testing Principles, Practices, and Patterns Vladimir Khorikov 2020-01-06 Radically improve your testing practice and software quality with new testing styles, good patterns, and reliable automation. Key Features A practical and results-driven approach to unit testing Refine your existing unit tests by implementing modern best practices Learn the four pillars of a good unit test Safely automate your testing process to save time and money Spot which tests need refactoring, and which need to be deleted entirely Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Great testing practices maximize your project quality and delivery speed by identifying bad code early in the development process. Wrong tests will break your code, multiply bugs, and increase time and costs. You owe it to yourself—and your projects—to learn how to do excellent unit testing. *Unit Testing Principles, Patterns and Practices* teaches you to design and write tests that target key areas of your code including the domain model. In this clearly written guide, you learn to develop professional-quality tests and test suites and integrate testing throughout the application life cycle. As you adopt a testing mindset, you'll be amazed at how better tests cause you to write better code. What You Will Learn Universal guidelines to assess any unit test Testing to identify and avoid anti-patterns Refactoring tests along with the production code Using integration tests to verify the whole system This Book Is Written For For readers who know the basics of unit testing. Examples are written in C# and can easily be applied to any language. About the Author Vladimir Khorikov is an author, blogger, and Microsoft MVP. He has mentored numerous teams on the ins and outs of unit testing. Table of Contents: PART 1 THE BIGGER PICTURE 1 | The goal of unit testing 2 | What is a unit test? 3 | The anatomy of a unit test PART 2 MAKING YOUR TESTS WORK FOR YOU 4 | The four pillars of a good unit test 5 | Mocks and test fragility 6 | Styles of unit testing 7 | Refactoring toward valuable unit tests PART 3 INTEGRATION TESTING 8 | Why integration testing? 9 | Mocking best practices 10 | Testing the database PART 4 UNIT TESTING ANTI-PATTERNS 11 | Unit testing anti-patterns

.NET IL Assembler Serge Lidin 2014-07-05 Advanced .NET IL Assembler is a comprehensive drill-down into the inner workings of the .NET Framework. Acknowledged runtime expert and Microsoft insider Serge Lidin steps through the internal structures and operations that take place when .NET code is executed, showing how the syntax and grammar of the coding language is broken down into low-level units that can be expressed through the ILAsm language that runs behind the scenes in .NET. By reading this book you will develop the skills you need to write tighter, faster, .NET code; to debug complex error handling situations; and to oversee multi-language and multi-platform projects with confidence.

Pro .NET Memory Management Konrad Kokosa 2018-11-12 Understand .NET memory management internal workings, pitfalls, and techniques in order to effectively avoid a wide range of performance and

scalability problems in your software. Despite automatic memory management in .NET, there are many advantages to be found in understanding how .NET memory works and how you can best write software that interacts with it efficiently and effectively. Pro .NET Memory Management is your comprehensive guide to writing better software by understanding and working with memory management in .NET. Thoroughly vetted by the .NET Team at Microsoft, this book contains 25 valuable troubleshooting scenarios designed to help diagnose challenging memory problems. Readers will also benefit from a multitude of .NET memory management “rules” to live by that introduce methods for writing memory-aware code and the means for avoiding common, destructive pitfalls. What You'll Learn Understand the theoretical underpinnings of automatic memory management Take a deep dive into every aspect of .NET memory management, including detailed coverage of garbage collection (GC) implementation, that would otherwise take years of experience to acquire Get practical advice on how this knowledge can be applied in real-world software development Use practical knowledge of tools related to .NET memory management to diagnose various memory-related issues Explore various aspects of advanced memory management, including use of Span and Memory types Who This Book Is For .NET developers, solution architects, and performance engineers

ASP.NET Core in Action Andrew Lock 2021-03-18 ASP.NET Core in Action, Second Edition is a comprehensive guide to creating web applications with ASP.NET Core 5.0. Go from basic HTTP concepts to advanced framework customization. Summary Fully updated to ASP.NET 5.0, ASP.NET Core in Action, Second Edition is a hands-on primer to building cross-platform web applications with your C# and .NET skills. Even if you've never worked with ASP.NET you'll start creating productive cross-platform web apps fast. And don't worry about late-breaking changes to ASP.NET Core. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Build full-stack web applications that run anywhere. Developers love ASP.NET Core for its libraries and pre-built components that maximize productivity. Version 5.0 offers new features for server-side apps, as well as background services for cross-platform development. About the book ASP.NET Core in Action, Second Edition is a comprehensive guide to creating web applications with ASP.NET Core 5.0. Go from basic HTTP concepts to advanced framework customization. Illustrations and annotated code make learning visual and easy. Master logins, dependency injection, security, and more. This updated edition covers the latest features, including Razor Pages and the new hosting paradigm. What's inside Developing apps for Windows and non-Windows servers Configuring applications Building custom components Logging, testing, and security About the reader For intermediate C# developers. About the author Andrew Lock is a Microsoft MVP who has worked with ASP.NET Core since before its first release. Table of Contents PART 1 - GETTING STARTED WITH ASP.NET CORE 1 Getting started with ASP.NET Core 2 Your first application 3 Handling requests with the middleware pipeline 4 Creating a website with Razor Pages 5 Mapping URLs to Razor Pages using routing 6 The binding model: Retrieving and validating user input 7 Rendering HTML using Razor views 8 Building forms with Tag Helpers 9 Creating a Web API for mobile and client applications using MVC PART 2 - BUILDING COMPLETE APPLICATIONS 10 Service configuration with dependency injection 11 Configuring an ASP.NET Core application 12 Saving data with Entity Framework Core 13 The MVC and Razor Pages filter pipeline 14 Authentication: Adding users to your application with Identity 15 Authorization: Securing your application 16 Publishing and deploying your application PART 3 - EXTENDING YOUR APPLICATIONS 17 Monitoring and troubleshooting errors with logging 18 Improving your application's security 19 Building custom components 20 Building custom MVC and Razor Pages components 21 Calling remote APIs with IHttpConnectionFactory 22 Building background tasks and services 23 Testing your application

The Complete ASP.NET Core 3 API Tutorial Les Jackson 2020-11-02 Use this ASP.NET Core API tutorial and straightforward step-by-step guide to build, test, and deploy an ASP.NET Core API to Azure. It will help

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you code confidently and efficiently, and provides just what you need for context. The book starts with detailing how to set up your development environment, and then introduces a variety of tools and technologies to build, test, and deploy your API. It covers tools such as .NET Core SDK, (Version 3.1), Visual Studio Code, Git, xUnit, Docker, PostgreSQL, Postman, Azure DevOps, Azure, AutoMapper, and many more. Practical guidance is provided so you can achieve a tangible and valuable outcome, and you also are given a dose of theory on REST (Representational State Transfer), JSON, (JavaScript Object Notation), DTOs (Data Transfer Objects), and the MVC (Model View Controller) architectural pattern. What You Will Learn Build an ASP.NET Core API using C#, test it, and deploy it to Azure Understand concepts on Entity Framework Core Gain hard-earned secrets, shortcuts, and gotchas throughout the “build along” Get comfortable with ASP NET Core Environments Be introduced to unit testing, CI/CD pipelines, bearer authentication, and JSON Web Tokens (JWT) Who This Book Is For Developers using the Microsoft stack. Some basic understanding of .NET Core is assumed.

Modern API Design with ASP.NET Core 2 Fanie Reynders 2018-03-07 Use ASP.NET Core 2 to create durable and cross-platform web APIs through a series of applied, practical scenarios. Examples in this book help you build APIs that are fast and scalable. You’ll progress from the basics of the framework through to solving the complex problems encountered in implementing secure RESTful services. The book is packed full of examples showing how Microsoft’s ground-up rewrite of ASP.NET Core 2 enables native cross-platform applications that are fast and modular, allowing your cloud-ready server applications to scale as your business grows. Major topics covered in the book include the fundamentals and core concepts of ASP.NET Core 2. You’ll learn about building RESTful APIs with the MVC pattern using proven best practices and following the six principles of REST. Examples in the book help in learning to develop world-class web APIs and applications that can run on any platform, including Windows, Linux, and MacOS. You can even deploy to Microsoft Azure and automate your delivery by implementing Continuous Integration and Continuous Deployment pipelines. What You Will Learn Incorporate automated API tooling such as Swagger from the OpenAPI specification Standardize query and response formats using Facebook’s GraphQL query language Implement security by applying authentication and authorization using ASP.NET Identity Ensure the safe storage of sensitive data using the data protection stack Create unit and integration tests to guarantee code quality Who This Book Is For Developers who build server applications such as web sites and web APIs that need to run fast and cross platform; programmers who want to implement practical solutions for real-world problems; those who want in-depth knowledge of the latest bits of ASP.NET Core 2.0

Writing High-Performance .Net Code Ben Watson 2014-07-23 Do you want your .NET code to have the absolute best performance it can? This book demystifies the CLR, teaching you how and why to write code with optimum performance. Learn critical lessons from a person who helped design and build one of the largest high-performance .NET systems in the world. This book does not just teach you how the CLR works-it teaches you exactly what you need to do now to obtain the best performance today. It will expertly guide you through the nuts and bolts of extreme performance optimization in .NET, complete with in-depth examinations of CLR functionality, free tool recommendations and tutorials, useful anecdotes, and step-by-step guides to measure and improve performance. Among the topics you will learn are how to: Choose what to measure and why Use many amazing tools, freely available, to solve problems quickly Understand the .NET garbage collector and its effect on your application Use effective coding patterns that lead to optimal garbage collection performance Diagnose common GC-related issues Reduce costs of JITting Use multiple threads sanely and effectively, avoiding synchronization problems Know which .NET features and APIs to use and which to avoid Use code generation to avoid performance problems Measure everything and expose hidden performance issues Instrument your program with performance counters and ETW events Use the latest and greatest .NET features Ensure your code can

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run on mobile devices without problems Build a performance-minded team ...and much more.

Extreme .NET Neil Roodyn 2005 Filled with practical, hands-on examples, this will be the first book Microsoft developers go to when learning Agile development techniques.

Mastering Ninject for Dependency Injection Daniel Baharestani 2013-09-25 Mastering Ninject for Dependency Injection teaches you the most powerful concepts of Ninject in a simple and easy-to-understand format using lots of practical examples, diagrams, and illustrations. Mastering Ninject for Dependency Injection is aimed at software developers and architects who wish to create maintainable, extensible, testable, and loosely coupled applications. Since Ninject targets the .NET platform, this book is not suitable for software developers of other platforms. Being familiar with design patterns such as singleton or factory would be beneficial, but no knowledge of dependency injection or IoC is assumed.

Metaprogramming in .NET Jason Bock 2012-12-30 Summary Metaprogramming in .NET is designed to help readers understand the basic concepts, advantages, and potential pitfalls of metaprogramming. It introduces core concepts in clear, easy-to-follow language and then it takes you on a deep dive into the tools and techniques you'll use to implement them in your .NET code. You'll explore plenty of real-world examples that reinforce key concepts. When you finish, you'll be able to build high-performance, metaprogramming-enabled software with confidence. About the Technology When you write programs that create or modify other programs, you are metaprogramming. In .NET, you can use reflection as well as newer concepts like code generation and scriptable software. The emerging Roslyn project exposes the .NET compiler as an interactive API, allowing compile-time code analysis and just-in-time refactoring. About this Book Metaprogramming in .NET is a practical introduction to the use of metaprogramming to improve the performance and maintainability of your code. This book avoids abstract theory and instead teaches you solid practices you'll find useful immediately. It introduces core concepts like code generation and application composition in clear, easy-to-follow language. Written for readers comfortable with C# and the .NET framework—no prior experience with metaprogramming is required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Metaprogramming concepts in plain language Creating scriptable software Code generation techniques The Dynamic Language Runtime About the Authors Kevin Hazzard is a Microsoft MVP, consultant, teacher, and developer community leader in the mid-Atlantic USA. Jason Bock is an author, Microsoft MVP, and the leader of the Twin Cities Code Camp. "An excellent way to start fully using the power of metaprogramming."—From the Foreword by Rockford Lhotka, Creator of the CSLA .NET Framework Table of Contents PART 1 DEMYSTIFYING METAPROGRAMMING Metaprogramming concepts Exploring code and metadata with reflection PART 2 TECHNIQUES FOR GENERATING CODE The Text Template Transformation Toolkit (T4) Generating code with the CodeDOM Generating code with Reflection.Emit Generating code with expressions Generating code with IL rewriting PART 3 LANGUAGES AND TOOLS The Dynamic Language Runtime Languages and tools Managing the .NET Compiler

Adaptive Code via C# Gary McLean Hall 2014-10-10 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>

IoT, AI, and Blockchain for .NET Nishith Pathak 2018-08-14 Create applications using Industry 4.0. Discover how artificial intelligence (AI) and machine learning (ML) capabilities can be enhanced using the Internet of things (IoT) and secured using Blockchain, so your latest app can be not just smarter but also more connected and more secure than ever before. This book covers the latest easy-to-use APIs and services from Microsoft, including Azure IoT, Cognitive Services APIs, Blockchain as a Service (BaaS), and Machine Learning Studio. As you work through the book, you'll get hands-on experience building an example solution that uses all of these technologies—an IoT suite for a smart healthcare facility. Hosted on Azure and networked using Azure IoT, the solution includes centralized patient monitoring, using Cognitive Services APIs for face detection, recognition, and tracking. Blockchain is used to create trust-based security and inventory management. Machine learning is used to create predictive solutions to proactively improve quality of life. By the end of the book, you'll be confident creating richer and smarter applications using these technologies. What You'll Learn Know the technologies underpinning Industry 4.0 and AI 2.0 Develop real-time solutions using IoT in Azure Bring the smart capabilities of AI 2.0 into your application using a simple API call Host and manage your solution on Azure Understand Blockchain as a Service Capture and analyze data on the fly Make predictions using existing data Who This Book Is For Novice and intermediate .NET developers and architects who want to learn what it takes to create a modern or next-generation application

Dependency Injection In.Net Mark Seemann Dependency Injection in .NET is a comprehensive guide that introduces DI and provides an in-depth look at applying DI practices to .NET apps. In it, you will also learn to integrate DI together with such technologies as Windows Communication Foundation, ASP.NET MVC, Windows Presentation Foundation and other core .NET components. Building on your existing knowledge of C# and the .NET platform, this book will be most beneficial for readers who have already built at least a few software solutions of intermediate complexity. Most examples are in plain C# without use of any particular DI framework. Later, the book introduces several well-known DI frameworks, such as StructureMap, Windsor and Spring.NET. For each framework, it presents examples of its particular usage, as well as examines how the framework relates to the common patterns presented earlier in the book.

Pro ASP.NET Core MVC 2 Adam Freeman 2017-10-24 Now in its 7th edition, the best selling book on MVC is updated for ASP.NET Core MVC 2. It contains detailed explanations of the Core MVC functionality which enables developers to produce leaner, cloud optimized and mobile-ready applications for the .NET platform. This book puts ASP.NET Core MVC into context and dives deep into the tools and techniques required to build modern, cloud optimized extensible web applications. All the new MVC features are described in detail and the author explains how best to apply them to both new and existing projects. The ASP.NET Core MVC Framework is the latest evolution of Microsoft's ASP.NET web platform, built on a completely new foundation. It represents a fundamental change to how Microsoft constructs and deploys web frameworks and is free of the legacy of earlier technologies such as Web Forms. ASP.NET Core MVC provides a "host agnostic" framework and a high-productivity programming model that promotes cleaner code architecture, test-driven development, and powerful extensibility. Best-selling author Adam Freeman has thoroughly revised this market-leading book and explains how to get the most from ASP.NET Core MVC. He starts with the nuts-and-bolts and shows you everything through to advanced features, going in-depth to give you the knowledge you need. The book includes a fully worked case study of a functioning web application that readers can use as a template for their own projects. What's New in This Edition Fully updated for Visual Studio 2017, C# 7 and .NET Core 2 Coverage of new features

such as view filters Wider platform and tooling coverage than ever before, with more on Visual Studio Code and working with .NET Core on non-Windows platforms Docker-based application deployment What You Will Learn Gain a solid architectural understanding of ASP.NET Core MVC Explore the entire ASP.NET MVC Framework as a cohesive whole See how MVC and test-driven development work in action Learn what's new in ASP.NET Core MVC 2 and how best to apply these new features to your own work See how to create RESTful web services and Single Page Applications Build on your existing knowledge of previous MVC releases to get up and running with the new programming model quickly and effectively Who This Book Is For This book is for web developers with a basic knowledge of ASP.NET and C# who want to incorporate the latest improvements and functionality in the ASP.NET Core MVC 2 Framework.

The Art of Unit Testing Roy Osherove 2013-11-24 Summary The Art of Unit Testing, Second Edition guides you step by step from writing your first simple tests to developing robust test sets that are maintainable, readable, and trustworthy. You'll master the foundational ideas and quickly move to high-value subjects like mocks, stubs, and isolation, including frameworks such as Moq, FakeItEasy, and Typemock Isolator. You'll explore test patterns and organization, working with legacy code, and even "untestable" code. Along the way, you'll learn about integration testing and techniques and tools for testing databases and other technologies. About this Book You know you should be unit testing, so why aren't you doing it? If you're new to unit testing, if you find unit testing tedious, or if you're just not getting enough payoff for the effort you put into it, keep reading. The Art of Unit Testing, Second Edition guides you step by step from writing your first simple unit tests to building complete test sets that are maintainable, readable, and trustworthy. You'll move quickly to more complicated subjects like mocks and stubs, while learning to use isolation (mocking) frameworks like Moq, FakeItEasy, and Typemock Isolator. You'll explore test patterns and organization, refactor code applications, and learn how to test "untestable" code. Along the way, you'll learn about integration testing and techniques for testing with databases. The examples in the book use C#, but will benefit anyone using a statically typed language such as Java or C++. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside Create readable, maintainable, trustworthy tests Fakes, stubs, mock objects, and isolation (mocking) frameworks Simple dependency injection techniques Refactoring legacy code About the Author Roy Osherove has been coding for over 15 years, and he consults and trains teams worldwide on the gentle art of unit testing and test-driven development. His blog is at ArtOfUnitTesting.com. Table of Contents PART 1 GETTING STARTED The basics of unit testing A first unit test PART 2 CORE TECHNIQUES Using stubs to break dependencies Interaction testing using mock objects Isolation (mocking) frameworks Digging deeper into isolation frameworks PART 3 THE TEST CODE Test hierarchies and organization The pillars of good unit tests PART 4 DESIGN AND PROCESS Integrating unit testing into the organization Working with legacy code Design and testability

ASP.NET 4.0 in Practice Stefano Mostarda 2011-05-14 Summary ASP.NET 4.0 in Practice contains over 100 real world techniques distilled from the experience of a team of MVPs. Using a practical problem-solution-discussion format, the book will guide you through the most common scenarios you will face in a typical ASP.NET application, and provide solutions and suggestions to take your applications to another level. About the Technology ASP.NET is an established technology to build web applications using Microsoft products. It drives a number of enterprise-level web sites around the world, but it can be scaled for projects of any size. The new version 4.0 is an evolutionary step: you will find a lot of new features that you will be able to leverage to build better web applications with minimal effort. About the Book ASP.NET is a massive framework that requires a large amount of know-how from developers. Fortunately, this book distills over 100 practical ASP.NET techniques from the experience of a team of MVPs, and puts them right at your fingertips. The techniques are tested and selected for their usefulness, and they are all presented in a simple problem-solution-discussion format. You'll discover methods for key new subjects

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like data integration with Entity Framework and ASP.NET MVC. Along the way, you'll also find ways to make your applications fast and secure. This book is written for developers familiar with the basics of ASP.NET, looking to become more productive with it. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside The Identity Map pattern in EF 4 Use Master Pages to define a common UI Adaptive Rendering Save user login data securelyand much more

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ASP.NET FUNDAMENTALS Getting acquainted with ASP.NET 4.0 Data access reloaded: Entity Framework Integrating Entity Framework and ASP.NET PART 2 ASP.NET WEB FORMS Building the user interface with ASP.NET Web Forms Data binding in ASP.NET Web Forms Custom controls Taking control of markup PART 3 ASP.NET MVC Introducing ASP.NET MVC Customizing and extending ASP.NET MVC PART 4 SECURITY ASP.NET security ASP.NET authentication and authorization PART 5 ADVANCED TOPICS Ajax and RIAs with ASP.NET 4.0 State Caching in ASP.NET Extreme ASP.NET 4.0 Performance and optimizations

Code That Fits in Your Head Mark Seemann 2021-09-30 The latest title in Addison Wesley's world-renowned Robert C. Martin Series on better software development, Code That Fits in Your Head offers indispensable practical advice for writing code at a sustainable pace, and controlling the complexity that causes too many software projects to spin out of control. Reflecting decades of experience consulting on software projects and helping development teams succeed, Mark Seemann shares proven practices and heuristics, supported by realistic advice. His guidance ranges from checklists to teamwork, encapsulation to decomposition, API design to unit testing and troubleshooting. Throughout, Seemann illuminates his insights with up-to-date code examples drawn from a start to finish sample project. Seemann's examples are written in C##, and designed to be clear and useful to every object-oriented enterprise developer, whether they use C#, Java, or another language. Code That Fits in Your Head is accompanied by the complete code base for this sample application, organized in a Git repository to facilitate further exploration of details that don't fit in the text.

Programming Entity Framework Julia Lerman 2012 Shows how to perform set operations with the DbSet class, control change tracking, fix concurrency conflicts, and confirm changes made to data.

Google Guice Robbie Vanbrabant 2008-07-15 Guice (pronounced "Juice") is the Jolt Award-winning, 100% Java icing on the cake of Java dependency injection. Unlike other popular dependency injection frameworks such as Spring, Guice fully embraces modern Java language features and combines simplicity with stunning performance and developer-friendliness. Google Guice: Agile Lightweight Dependency Injection Framework will not only tell you "how," it will also tell you "why" and "why not," so that all the knowledge you gain will be as widely applicable as possible. Filled with examples and background information, this book is an invaluable addition to your knowledge of modern agile Java. Learn simple annotation-driven dependency injection, scoping and aspect-oriented programming, and why it all works the way it works Be the first to familiarize yourself with concepts that are likely to be included in a future Java EE or SE release (through JSR 299) Get things done without having to write any XML

Rx.NET in Action Tamir Dresher 2017-04-20 Summary Rx.NET in Action teaches developers how to build event-driven applications using the Reactive Extensions (Rx) library. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Modern applications must react to streams of data such as user and system events, internal messages, and sensor input. Reactive Extensions (Rx) is a .NET library containing more than 600 operators that you can compose together to build reactive client- and server-side applications to handle events

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asynchronously in a way that maximizes responsiveness, resiliency, and elasticity. About the Book Rx.NET in Action teaches developers how to build event-driven applications using the Rx library. Starting with an overview of the design and architecture of Rx-based reactive applications, you'll get hands-on with in-depth code examples to discover firsthand how to exploit the rich query capabilities that Rx provides and the Rx concurrency model that allows you to control both the asynchronicity of your code and the processing of event handlers. You'll also learn about consuming event streams, using schedulers to manage time, and working with Rx operators to filter, transform, and group events. What's Inside Introduction to Rx in C# Creating and consuming streams of data and events Building complex queries on event streams Error handling and testing Rx code About the Reader Readers should understand OOP concepts and be comfortable coding in C#. About the Author Tamir Dresher is a senior software architect at CodeValue and a prominent member of Israel's Microsoft programming community. Table of Contents PART 1 - GETTING STARTED WITH REACTIVE EXTENSIONS Reactive programming Hello, Rx Functional thinking in C# PART 2 - CORE IDEAS Creating observable sequences Creating observables from .NET asynchronous types Controlling the observer-observable relationship Controlling the observable temperature Working with basic query operators Partitioning and combining observables Working with Rx concurrency and synchronization Error handling and recovery APPENDIXES Writing asynchronous code in .NET The Rx Disposables library Testing Rx queries and operators

Dependency Injection Principles, Practices, and Patterns Mark Seemann 2019-03-06 Summary Dependency Injection Principles, Practices, and Patterns teaches you to use DI to reduce hard-coded dependencies between application components. You'll start by learning what DI is and what types of applications will benefit from it. Then, you'll work through concrete scenarios using C# and the .NET framework to implement DI in your own projects. As you dive into the thoroughly-explained examples, you'll develop a foundation you can apply to any of the many DI libraries for .NET and .NET Core. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Dependency Injection (DI) is a great way to reduce tight coupling between software components. Instead of hard-coding dependencies, such as specifying a database driver, you make those connections through a third party. Central to application frameworks like ASP.NET Core, DI enables you to better manage changes and other complexity in your software. About the Book Dependency Injection Principles, Practices, and Patterns is a revised and expanded edition of the bestselling classic Dependency Injection in .NET. It teaches you DI from the ground up, featuring relevant examples, patterns, and anti-patterns for creating loosely coupled, well-structured applications. The well-annotated code and diagrams use C# examples to illustrate principles that work flawlessly with modern object-oriented languages and DI libraries. What's Inside Refactoring existing code into loosely coupled code DI techniques that work with statically typed OO languages Integration with common .NET frameworks Updated examples illustrating DI in .NET Core About the Reader For intermediate OO developers. About the Authors Mark Seemann is a programmer, software architect, and speaker who has been working with software since 1995, including six years with Microsoft. Steven van Deursen is a seasoned .NET developer and architect, and the author and maintainer of the Simple Injector DI library. Table of Contents PART 1 Putting Dependency Injection on the map The basics of Dependency Injection: What, why, and how Writing tightly coupled code Writing loosely coupled code PART 2 Catalog DI patterns DI anti-patterns Code smells PART 3 Pure DI Application composition Object lifetime Interception Aspect-Oriented Programming by design Tool-based Aspect-Oriented Programming PART 4 DI Containers DI Container introduction The Autofac DI Container The Simple Injector DI Container The Microsoft.Extensions.DependencyInjection DI Container

C# in Depth Jonathan Skeet 2019-03-07 Effective techniques and experienced insights to maximize your C# 6 and 7 programming skills Key Features Written by C# legend and top StackOverflow contributor Jon

Skeet Unlock the new features of C# 6 and 7 Insights on the future of the C# language Master asynchronous functions, interpolated strings, tuples, and more Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. "An excellent overview of C# with helpful and realistic examples that make learning the newest features of C# easy." —Meredith Godar About The Book C# is the foundation of .NET development. New features added in C# 6 and 7 make it easier to take on big data applications, cloud-centric web development, and cross-platform software using .NET Core. Packed with deep insight from C# guru Jon Skeet, this book takes you deep into concepts and features other C# books ignore. C# in Depth, Fourth Edition is an authoritative and engaging guide that reveals the full potential of the language, including the new features of C# 6 and 7. It combines deep dives into the C# language with practical techniques for enterprise development, web applications, and systems programming. As you absorb the wisdom and techniques in this book, you'll write better code, and become an exceptional troubleshooter and problem solver. What You Will Learn Comprehensive guidance on the new features of C# 6 and 7 Important legacies and greatest hits of C# 2-5 Expression-bodied members Extended pass-by-reference functionality Writing asynchronous C# code String interpolation Composition with tuples Decomposition and pattern matching This Book Is Written For For intermediate C# developers. About The Author Jon Skeet is a senior software engineer at Google. He studied mathematics and computer science at Cambridge, is a recognized authority in Java and C#, and maintains the position of top contributor to Stack Overflow. Table of Contents 1. Survival of the sharpest 2. C# 2 3. C# 3: LINQ and everything that comes with it 4. C# 4: Improving interoperability 5. Writing asynchronous code 6. Async implementation 7. C# 5 bonus features 8. Super-sleek properties and expression-bodied members 9. Stringy features 10. A smörgåsbord of features for concise code 11. Composition using tuples 12. Deconstruction and pattern matching 13. Improving efficiency with more pass by reference 14. Concise code in C# 7 15. C# 8 and beyond PART 1 C# IN CONTEXT PART 2 C# 2-5 PART 3 C# 6 PART 4 C# 7 AND BEYOND