

Dependency Injection In Net Mark Seemann

Summary In 2017, consumers downloaded 178 billion apps, and analysts predict growth to 258 billion by 2022. Mobile customers are demanding more—and better—apps, and it's up to developers like you to write them! Flutter, a revolutionary new cross-platform software development kit created by Google, makes it easier than ever to write secure, high-performance native apps for iOS and Android. Flutter apps are blazingly fast because this open source solution compiles your Dart code to platform-specific programs with no JavaScript bridge! Flutter also supports hot reloading to update changes instantly. And thanks to its built-in widgets and rich motion APIs, Flutter's apps are not just highly responsive, they're stunning! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology With Flutter, you can build mobile applications using a single, feature-rich SDK that includes everything from a rendering engine to a testing environment. Flutter compiles programs written in Google's intuitive Dart language to platform-specific code so your iOS and Android games, utilities, and shopping platforms all run like native Java or Swift apps. About the book Flutter in Action teaches you to build professional-quality mobile applications using the Flutter SDK and the Dart programming language. You'll begin with a quick tour of Dart essentials and then dive into engaging, well-described techniques for building beautiful user interfaces using Flutter's huge collection of built-in widgets. The combination of diagrams, code examples, and annotations makes learning a snap. As you go, you'll appreciate how the author makes easy reading of complex topics like routing, state management, and async programming. What's inside Understanding the Flutter approach to the UI All the Dart you need to get started Creating custom animations Testing and debugging About the reader You'll need basic web or mobile app development skills. About the author Eric Windmill is a professional Dart developer and a contributor to open-source Flutter projects. His work is featured on the Flutter Showcase page. Table of Contents: PART 1 - MEET FLUTTER 1 | Meet Flutter 2 | A brief intro to Dart 3 | Breaking into Flutter PART 2 - FLUTTER USER INTERACTION, STYLES, AND ANIMATIONS 4 | Flutter UI: Important widgets, themes, and layout 5 | User interaction: Forms and gestures 6 | Pushing pixels: Flutter animations and using the canvas PART 3 - STATE MANAGEMENT AND ASYNCHRONOUS DART 7 | Flutter routing in depth 8 | Flutter state management 9 | Async Dart and Flutter and infinite scrolling PART 4 - BEYOND FOUNDATIONS 10 | Working with data: HTTP, Firestore, and JSON 11 | Testing Flutter apps

Summary ASP.NET MVC 4 in Action is a fast-paced tutorial designed to introduce ASP.NET MVC to .NET developers and show how to apply it effectively. All examples in this revised edition are based on ASP.NET MVC 4, so you'll get full coverage of features such as the Razor view engine, Web Matrix helpers, and improved extensibility. You'll see how your ASP.NET applications can benefit from changes in the .NET Framework. About the Technology ASP.NET MVC provides the architecture needed to separate an application's logic and its UI. Because each component's role is well defined, MVC applications are easy to test, maintain, and extend. The latest version, ASP.NET MVC 4, takes advantage of .NET 4 and includes powerful features like the Razor view engine, Web Matrix helpers, and enhanced extensibility. About the Book ASP.NET MVC 4 in Action is a hands-on guide that shows you how to apply ASP.NET MVC effectively. After a high-speed ramp up, this thoroughly revised new edition explores each key topic with a self-contained example so you can jump right to the parts you need. Based on thousands of hours of real-world experience, the authors show you valuable high-end techniques you won't find anywhere else. Written for developers, the book arms you with the next-level skills and practical guidance to create compelling web applications. You need some knowledge of ASP.NET and C#, but no prior ASP.NET MVC experience is assumed. 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 Complete coverage of ASP.NET MVC 4 The new Web API Full-system testing About the Authors Jeffrey Palermo, Jimmy Bogard, Eric Hexter, Matthew Hinze, and Jeremy Skinner are all ASP.NET MVPs, ASP insiders, and early adopters of ASP.NET MVC. ===== Table of Contents PART 1 HIGH-SPEED FUNDAMENTALS Introduction to ASP.NET MVC Hello MVC world View fundamentals Action-packed controllers PART 2 WORKING WITH ASP.NET MVC View models Validation Ajax in ASP.NET MVC Security Controlling URLs with routing Model binders and value providers Mapping with AutoMapper Lightweight controllers Organization with areas Third-party components Data access with NHibernate PART 3 MASTERING ASP.NET MVC Extending the controller Advanced view techniques Dependency injection and extensibility Portable areas Full system testing Hosting ASP.NET MVC applications Deployment techniques Upgrading to ASP.NET MVC 4 ASP.NET Web API

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.

Summary AOP in .NET introduces aspect-oriented programming to .NET developers and provides practical guidance on how to get the most benefit from this technique in your everyday coding. The book's many examples concentrate on modularizing non-functional requirements that often sprawl throughout object-oriented projects. Even if you've never tried AOP before, you'll appreciate the straightforward introduction using familiar C#-based examples. AOP tools for .NET have now reached the level of practical maturity Java developers have relied on for many years, and you'll explore the leading options, PostSharp, and Castle DynamicProxy. About the Technology Core concerns that cut across all parts of your application, such as logging or authorization, are difficult to maintain independently. In aspect-oriented programming (AOP) you isolate these cross-cutting concerns into their own classes, disentangling them from business logic. Mature AOP tools like PostSharp and Castle DynamicProxy now offer .NET developers the level of support Java coders have relied on for years. About this Book AOP in .NET introduces aspect-oriented programming and provides guidance on how to get the most practical benefit from this technique. The book's many examples concentrate on modularizing non-functional requirements that often sprawl throughout object-oriented projects. You'll appreciate its straightforward introduction using familiar C#-based examples. This book requires no prior experience with AOP. Readers should know C# or another OO language. What's Inside Clear and simple introduction to AOP Maximum benefit with minimal theory PostSharp and Castle DynamicProxy Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Author Matthew D. Groves is a developer with over ten years of professional experience working with C#, ASP.NET, JavaScript, and PHP. Table of Contents PART 1 GETTING STARTED WITH AOP Introducing

AOP Acme Car Rental PART 2 THE FUNDAMENTALS OF AOP Call this instead: intercepting methods Before and after: boundary aspects Get this instead: intercepting locations Unit testing aspects PART 3 ADVANCED AOP CONCEPTS AOP implementation types Using AOP as an architectural tool Aspect composition: example and execution

From learning about the most sought-after design patterns to a comprehensive coverage of architectural patterns and code testing, this book is all you need to write clean, reusable code. Key Features Write clean, reusable and maintainable code, and make the most of the latest Swift version. Analyze case studies of some of the popular open source projects and give your workflow a huge boost. Choose patterns such as MVP, MVC, and MVVM depending on the application being built. Book Description Swift keeps gaining traction not only amongst Apple developers but also as a server-side language. This book demonstrates how to apply design patterns and best practices in real-life situations, whether that's for new or already existing projects. You'll begin with a quick refresher on Swift, the compiler, the standard library, and the foundation, followed by the Cocoa design patterns – the ones at the core of many Cocoa libraries – to follow up with the creational, structural, and behavioral patterns as defined by the GoF. You'll get acquainted with application architecture, as well as the most popular architectural design patterns, such as MVC and MVVM, and learn to use them in the context of Swift. In addition, you'll walk through dependency injection and functional reactive programming. Special emphasis will be given to techniques to handle concurrency, including callbacks, futures and promises, and reactive programming. These techniques will help you adopt a test-driven approach to your workflow in order to use Swift Package Manager and integrate the framework into the original code base, along with Unit and UI testing. By the end of the book, you'll be able to build applications that are scalable, faster, and easier to maintain. What you will learn Work efficiently with Foundation and Swift Standard library Understand the most critical GoF patterns and use them efficiently Use Swift 4.2 and its unique capabilities (and limitations) to implement and improve GoF patterns Improve your application architecture and optimize for maintainability and performance Write efficient and clean concurrent programs using futures and promises, or reactive programming techniques Use Swift Package Manager to refactor your program into reusable components Leverage testing and other techniques for writing robust code Who this book is for This book is for intermediate developers who want to apply design patterns with Swift to structure and scale their applications. You are expected to have basic knowledge of iOS and Swift.

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 "Welcome to one of the greatest collaborations you could dream of in the world of C# books—and probably far beyond!" —From the Foreword by Mads Torgersen, C# Program Manager, Microsoft Essential C# 6.0 is a well-organized, no-fluff guide to the latest versions of C# for programmers at all levels of experience. Fully updated to reflect new C# 6.0 and .NET 4.6 features and patterns, it will help you write C# code that's simple, powerful, robust, secure, and maintainable. This book's authors are world-class C# experts: long-time Microsoft MVP and Regional Director Mark Michaelis and Eric Lippert, formerly principal developer on Microsoft's C# compiler team. Together, they cover the entire language, illustrating key constructs with succinct examples and offering a complete foundation for successful C# development. Essential C# 6.0 makes it easy to program with any version of C#, whether you're creating new code or maintaining existing systems. Separate indexes for C# versions 4, 5, and 6 help you quickly find version-specific answers with accompanying visual indicators that help you identify which language innovations will work when. This edition also includes a set of best-practice C# Coding Guidelines updated to leverage C# 6.0 constructs. Coverage includes Mastering C# data types, operators, control flow, methods, and parameters Using C# object-oriented constructs, including classes, inheritance, interfaces, and more—all with the significantly simplified syntax of C# 6.0 Working with well-formed value and reference types Implementing reliable, effective exception handling Reducing code complexity with generics, delegates, lambda expressions, and events (including a simplified C# 6.0 syntax for triggering events) Learning dynamic programming with reflection and attributes Querying diverse data collections using LINQ with query expressions Creating custom collections that operate against business objects Using collection interfaces and standard query operators to access .NET collections Understanding the Common Language Infrastructure and C# in the context of .NET 4.6 Taking advantage of declarative programming, embedded metadata, reflection, and attributes Mastering multithreading and synchronization, including the new async/await paradigm Using P/Invoke, pointers, and direct memory manipulation to interoperate with other languages Understanding how C# programs relate to the underlying runtime For Qualified Instructors An instructor's guide, exercises, and a slide deck are available to support your courses.

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

C# Smorgasbord covers a vast variety of different technologies, patterns and best practices that any C# developer should master. Looking at everything from testing strategies to compilation as a service and how to do really advance things in runtime; you get a great sense of what you as a developer can do. By taking his personal views and his personal experience, Filip digs into each subject with a personal touch and by having real world problems at hand; we can look at how these problems could be tackled. No matter if you are an experienced .NET developer, or a beginner, you will most certainly find a lot of interesting things in this book. The book covers important patterns and technologies that any developer would benefit from mastering. Explore your possibilities Improve your skills Be Inspired to challenge yourself Is there a digital version(ebook)? Yes there is! Everyone that purchases the printed copy will get the ebook for free. Instructions for how to receive the ebook is inside the printed book. Table of Contents Introduction to Parallel Extensions Productivity and Quality with Unit Testing Is upgrading your code a productive step? Creating a challenge out of the trivial tasks Asynchronous programming with async and await Dynamic programming Increase readability with anonymous types and methods Exploring Reflection Creating things at runtime Introducing Roslyn Adapting to Inversion of Control Are you Mocking me? Who this book is for This book is for those developers that find themselves wanting to explore C# but do not know how or where to start looking. Each chapter contains hands on code examples that can be compiled and tested on your machine. Although each chapter has code samples, you do not need to use a computer to appreciate the content of this book. The code samples are divided into smaller portions of code, so that you can follow each example and the thoughts around it in an easy way. No matter if you are an experienced .NET developer or a beginner, you will most certainly find a lot of interesting things in this book. The book covers important patterns and technologies that any developer would benefit from mastering. It is not required that you have worked with C# before but being familiar to the fundamentals in any of the .NET programming languages will help you on the way. If you are just now starting to learn C#, this can be a great way for you to learn about different techniques, best practices, patterns and how to think in certain scenarios. But if you have worked with C# development for many years, this book can give you a refreshing view on how to always improve and challenge yourself into becoming a better software engineer.

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.

Develop robust and reusable code using a multitude of design patterns for PHP 7 About This Book Learn about advanced design patterns in PHP 7 Understand enhanced architectural patterns Learn to implement reusable design patterns to address common recurring problems Who This Book Is For This book is for PHP developers who wish to have better organization structure over their code through learning common methodologies to solve architectural problems against a backdrop of learning new functionality in PHP 7. What You Will Learn Recognize recurring problems in your code with Anti-Patterns Uncover object creation mechanisms using Creational Patterns Use Structural design patterns to easily access your code Address common issues encountered when linking objects using the splObserver classes in PHP 7 Achieve a common style of coding with Architectural Patterns Write reusable code for common MVC frameworks such as Zend, Laravel, and Symfony Get to know the best practices associated with design patterns when used with PHP 7 In Detail Design patterns are a clever way to solve common architectural issues that arise during software development. With an increase in demand for enhanced programming techniques and the versatile nature of PHP, a deep understanding of PHP design patterns is critical to achieve efficiency while coding. This comprehensive guide will show you how to achieve better organization structure over your code through learning common methodologies to solve architectural problems. You'll also learn about the new functionalities that PHP 7 has to offer. Starting with a brief introduction to design patterns, you quickly dive deep into the three main architectural patterns: Creational, Behavioral, and Structural popularly known as the Gang of Four patterns. Over the course of the book, you will get a deep understanding of object creation mechanisms, advanced techniques that address issues concerned with linking objects together, and improved methods to access your code. You will also learn about Anti-Patterns and the best methodologies to adopt when building a PHP 7 application. With a concluding chapter on best practices, this book is a complete guide that will equip you to utilize design patterns in PHP 7 to achieve maximum productivity, ensuring an enhanced software development experience. Style and approach The book covers advanced design patterns in detail in PHP 7 with the help of rich code-based examples.

This book starts with an introduction to the core concepts of .NET memory management and garbage collection, and then quickly layers on additional details and intricacies. Once you're up to speed, you can dive into the guided troubleshooting tour, and tips for engineering your application to maximise performance. And to finish off, take a look at some more sophisticated considerations, and even a peek inside the Windows memory model.

Over the years software systems have evolutionarily become more and more complex. One of the techniques for dealing with this inherent complexity of software systems is dependency injection - a design pattern that allows the removal of hard-coded dependencies and makes it possible to assemble a service by changing dependencies easily, whether at run-time or compile-time. It promotes code reuse and loosely-coupled design which leads to more easily maintainable and flexible code. The guide you are holding in your hands is a primer on using dependency injection with Unity - a lightweight extensible dependency injection container built by the Microsoft patterns & practices team. It covers various styles of dependency injection and also additional capabilities of Unity container, such as object lifetime management, interception, and registration by convention. It also discusses the advanced topics of enhancing Unity with your custom extensions. The guide contains plenty of trade-off discussions and tips and tricks for managing your application cross-cutting concerns and making the most out of both dependency injection and Unity. These are accompanied by a real world example that will help you master the techniques. Keep in mind that Unity can be used in a wide range of application types such as desktop, web, services, and cloud. We encourage you to experiment with the sample code and think beyond the scenarios discussed in the guide. In addition, the guide includes the Tales from the Trenches - a collection of case studies that offer a different perspective through the eyes of developers working on the real world projects and sharing their experiences. These chapters make clear the range of scenarios in which you can use Unity, and also highlight its ease of use and flexibility. Whether you are a seasoned developer or just starting your development journey, we hope this guide will be worth your time studying it. We hope you discover that Unity container adds significant benefits to your applications and helps you to achieve the goals of maintainability, testability, flexibility, and extensibility in your own projects.

PHP is experiencing a renaissance, though it may be difficult to tell with all of the outdated PHP tutorials online. With this practical guide, you'll learn how PHP has become a full-featured, mature language with object-orientation, namespaces, and a growing collection of reusable component libraries. Author Josh Lockhart—creator of PHP The Right Way, a popular initiative to encourage PHP best practices—reveals these new language features in action. You'll learn best practices for application architecture and planning, databases, security, testing, debugging, and deployment. If you have a basic understanding of PHP and want to bolster your skills, this is your book. Learn modern PHP features, such as namespaces, traits, generators, and closures Discover how to find, use, and create PHP components Follow best practices for application security, working with databases, errors and exceptions, and more Learn tools and techniques for deploying, tuning, testing, and profiling your PHP applications Explore Facebook's HVVM and Hack language implementations—and how they affect modern PHP Build a local development environment that closely matches your production server

Microservices in .NET, Second Edition teaches you to build and deploy microservices using ASP.NET and Azure services. Summary In Microservices in .NET, Second Edition you will learn how to: Build scalable microservices that are reliable in production Optimize microservices for continuous delivery Design event-based collaboration between microservices Deploy microservices to Kubernetes Set up Kubernetes in Azure Microservices in .NET, Second Edition is a comprehensive guide to building microservice applications using the .NET stack. After a crystal-clear introduction to the microservices architectural style, it teaches you practical microservices development skills using ASP.NET. This second edition of the bestselling original has been revised with up-to-date tools for the .NET ecosystem, and more new coverage of scoping microservices and deploying to Kubernetes. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Microservice architectures connect independent components that must work together as a system. Integrating new technologies like Docker and Kubernetes with Microsoft's familiar ASP.NET framework and Azure cloud platform enables .NET developers to create and manage microservices efficiently. About the book Microservices in .NET, Second Edition teaches you to build and deploy microservices using ASP.NET and Azure services. It lays out microservice architecture simply, and then guides you through several real-world projects, such as building an ecommerce shopping cart. In this fully revised edition, you'll learn about scoping microservices, deploying to Kubernetes, and operations concerns like monitoring, logging, and security. What's inside Optimize microservices for continuous delivery Design event-based collaboration between microservices Deploy microservices to Kubernetes Set up Kubernetes in Azure About the reader For C# developers. No experience with microservices required. About the author Christian Horsdal is an independent consultant with more than 20 years of experience building projects from large-scale microservice systems to tiny embedded systems. Table of Contents PART 1 GETTING STARTED WITH MICROSERVICES 1 Microservices at a glance 2 A basic shopping cart microservice 3 Deploying a microservice to Kubernetes PART 2 BUILDING MICROSERVICES 4 Identifying and scoping microservices 5 Microservice collaboration 6 Data ownership and data storage 7 Designing for robustness 8 Writing tests for microservices PART 3 HANDLING CROSS-CUTTING CONCERNS: BUILDING A REUSABLE MICROSERVICE PLATFORM 9 Cross-cutting concerns: Monitoring and logging 10 Securing microservice-to-microservice communication 11 Building a reusable microservice platform PART 4 BUILDING APPLICATIONS 12 Creating applications over microservices

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

Dependency Injection in .NET is a comprehensive guide than 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.

Visual Studio 2017 updates for this book are now available. Follow the Download Source Code link for this book on the Apress website. Now in its 6th edition, the best selling book on MVC is now updated for ASP.NET Core MVC. It contains detailed explanations of the new 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. This book follows the same format and style as the popular previous editions but brings everything up to date for the new ASP.NET Core MVC release. It presents a fully worked case study of a functioning ASP.NET MVC application that readers can use as a template for their own projects. 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 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 new ASP.NET Core MVC Framework.

Dependency Injection is an in-depth guide to the current best practices focusing 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.

Summary Concurrency in .NET teaches you 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 who are interested in writing code with improved speed and effectiveness by adopting a declarative and pain-free programming style. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Unlock the incredible performance built into your multi-processor machines. Concurrent applications run faster because they spread work across processor cores, performing several tasks at the same time. Modern tools and techniques on the .NET platform, including parallel LINQ, functional programming, asynchronous programming, and the Task Parallel Library, offer powerful alternatives to traditional thread-based concurrency. About the Book Concurrency in .NET teaches you to write code that delivers the speed you need for performance-sensitive applications. Featuring examples in both C# and F#, this book guides you through concurrent and parallel designs that emphasize functional programming in theory and practice. You'll start with the foundations of concurrency and master essential techniques and design practices to optimize code running on modern multiprocessor systems.

What's Inside The most important concurrency abstractions Employing the agent programming model Implementing real-time event-stream processing Executing unbounded asynchronous operations Best concurrent practices and patterns that apply to all platforms About the Reader For readers skilled with C# or F#. About the Book Riccardo Terrell is a seasoned software engineer and Microsoft MVP who is passionate about functional programming. He has over 20 years' experience delivering cost-effective technology solutions in a competitive business environment. Table of Contents PART 1 - Benefits of functional programming applicable to concurrent programs Functional concurrency foundations Functional programming techniques for concurrency Functional data structures and immutability PART 2 - How to approach the different parts of a concurrent program The basics of processing big data: data parallelism, part 1 PLINQ and MapReduce: data parallelism, part 2 Real-time event streams: functional reactive programming Task-based functional parallelism Task asynchronicity for the win Asynchronous functional programming in F# Functional combinators for fluent concurrent programming Applying reactive programming everywhere with agents Parallel workflow and agent programming with TPL Dataflow PART 3 - Modern patterns of concurrent programming applied Recipes and design patterns for successful concurrent programming Building a scalable mobile app with concurrent functional programming

Discover the essential design and architectural patterns with ASP.NET Core to solve common software design problems. With this book, you'll learn how to use a combination of design patterns and build fault-tolerant and robust full-stack apps and microservices with ASP.NET Core and C#.

Functional programming is a very powerful programming paradigm that can help us to write better code. This book presents essential functional and reactive programming concepts in a simplified manner using Typescript.

Rust in Action is a hands-on guide to systems programming with Rust. Written for inquisitive programmers, it presents real-world use cases that go far beyond syntax and structure. Summary Rust in Action introduces the Rust programming language by exploring numerous systems programming concepts and techniques. You'll be learning Rust by delving into how computers work under the hood. You'll find yourself playing with persistent storage, memory, networking and even tinkering with CPU instructions. The book takes you through using Rust to extend other applications and teaches you tricks to write blindingly fast code. You'll also discover parallel and concurrent programming. Filled to the brim with real-life use cases and scenarios, you'll go beyond the Rust syntax and see what Rust has to offer in real-world use cases. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Rust is the perfect language for systems programming. It delivers the low-level power of C along with rock-solid safety features that let you code fearlessly. Ideal for applications requiring concurrency, Rust programs are compact, readable, and blazingly fast. Best of all, Rust's famously smart compiler helps you avoid even subtle coding errors. About the book Rust in Action is a hands-on guide to systems programming with Rust. Written for inquisitive programmers, it presents real-world use cases that go far beyond syntax and structure. You'll explore Rust implementations for file manipulation, networking, and kernel-level programming and discover awesome techniques for parallelism and concurrency. Along the way, you'll master Rust's unique borrow checker model for memory management without a garbage collector. What's inside Elementary to advanced Rust programming Practical examples from systems programming Command-line, graphical and networked applications About the reader For intermediate programmers. No previous experience with Rust required. About the author Tim McNamara uses Rust to build data processing pipelines and generative art. He is an expert in natural language processing and data engineering. Table of Contents 1 Introducing Rust PART 1 RUST

LANGUAGE DISTINCTIVES 2 Language foundations 3 Compound data types 4 Lifetimes, ownership, and borrowing PART 2 DEMYSTIFYING SYSTEMS PROGRAMMING 5 Data in depth 6 Memory 7 Files and storage 8 Networking 9 Time and timekeeping 10 Processes, threads, and containers 11 Kernel 12 Signals, interrupts, and exceptions 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

In 1994, Design Patterns changed the landscape of object-oriented development by introducing classic solutions to recurring design problems. In 1999, Refactoring revolutionized design by introducing an effective process for improving code. With the highly anticipated Refactoring to Patterns , Joshua Kerievsky has changed our approach to design by forever uniting patterns with the evolutionary process of refactoring. This book introduces the theory and practice of pattern-directed refactorings: sequences of low-level refactorings that allow designers to safely move designs to, towards, or away from pattern implementations. Using code from real-world projects, Kerievsky documents the thinking and steps underlying over two dozen pattern-based design transformations. Along the way he offers insights into pattern differences and how to implement patterns in the simplest possible ways. Coverage includes: A catalog of twenty-seven pattern-directed refactorings, featuring real-world code examples Descriptions of twelve design smells that indicate the need for this book's refactorings General information and new insights about patterns and refactoring Detailed implementation mechanics: how low-level refactorings are combined to implement high-level patterns Multiple ways to implement the same pattern—and when to use each Practical ways to get started even if you have little experience with patterns or refactoring Refactoring to Patterns reflects three years of refinement and the insights of more than sixty software engineering thought leaders in the global patterns, refactoring, and agile development communities. Whether you're focused on legacy or "greenfield" development, this book will make you a better software designer by helping you learn how to make important design changes safely and effectively.

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

Summary Entity Framework Core in Action teaches you how to access and update relational data from .NET applications. Following the crystal-clear explanations, real-world examples, and around 100 diagrams, you'll discover time-saving patterns and best practices for security, performance tuning, and unit testing. Purchase of the print book includes

a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology There's a mismatch in the way OO programs and relational databases represent data. Entity Framework is an object-relational mapper (ORM) that bridges this gap, making it radically easier to query and write to databases from a .NET application. EF creates a data model that matches the structure of your OO code so you can query and write to your database using standard LINQ commands. It will even automatically generate the model from your database schema. About the Book Using crystal-clear explanations, real-world examples, and around 100 diagrams, Entity Framework Core in Action teaches you how to access and update relational data from .NET applications. You'll start with a clear breakdown of Entity Framework, long with the mental model behind ORM. Then you'll discover time-saving patterns and best practices for security, performance tuning, and even unit testing. As you go, you'll address common data access challenges and learn how to handle them with Entity Framework. What's Inside Querying a relational database with LINQ Using EF Core in business logic Integrating EF with existing C# applications Applying domain-driven design to EF Core Getting the best performance out of EF Core Covers EF Core 2.0 and 2.1 About the Reader For .NET developers with some awareness of how relational databases work. About the Author Jon P Smith is a full-stack developer with special focus on .NET Core and Azure. Table of Contents Part 1 - Getting started Introduction to Entity FrameworkCore Querying the database Changing the database content Using EF Core in business logic Using EF Core in ASP.NET Core web applications Part 2 - Entity Framework in depth Configuring nonrelational properties Configuring relationships Configuring advanced features and handling concurrency conflicts Going deeper into the DbContext Part 3 - Using Entity Framework Core in real-world applications Useful software patterns for EF Core applications Handling database migrations EF Core performance tuning A worked example of performance tuning Different database types and EF Core services Unit testing EF Core applications Appendix A - A brief introduction to LINQ Appendix B - Early information on EF Core version 2.1

This bestselling comprehensive guide to ASP.NET Core is the only book you need for ASP.NET Core development. Period. Professional developers will produce leaner applications for the ASP.NET Core platform using the guidance in this full-color book, now in its 8th edition and updated for ASP.NET Core 3. It contains detailed explanations of the ASP.NET Core platform and the application frameworks it supports. This edition puts ASP.NET Core 3 into context and dives deep 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 are applied. ASP.NET Core 3 is the latest evolution of Microsoft's ASP.NET web platform and 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 3. He starts with the nuts-and-bolts topics, teaching you about middleware components, built-in services, request model binding, and more. As you gain knowledge and confidence, he introduces increasingly more complex topics and advanced features, including endpoint routing and dependency injection. He goes in depth to give you the knowledge you need. This book follows the same format and style as the popular previous editions but brings everything up-to-date for the new ASP.NET Core 3 release and broadens the focus to include the entire ASP.NET Core platform. You will appreciate the fully worked case study of a functioning ASP.NET Core application that you can use as a template for your own projects. What You Will Learn Build a solid foundation and skill set for working with the entire ASP.NET Core platform Apply the new ASP.NET Core 3 features in your developer environment See how to create RESTful web services, web applications, and client-side applications Build on your existing knowledge to get up and running with new programming models quickly and effectively Who This Book Is For This book is for Microsoft developers and assumes a basic knowledge of web development and C#. While written for professionals who want to incorporate the latest improvements and functionality of ASP.NET Core 3 into their own projects, it also serves as an in-depth and complete reference on the topic. Beginners with some background in Microsoft web development will also benefit from the comprehensive coverage of the topic.

Dino Esposito's Programming ASP.NET Core is the definitive guide to practical software development with Microsoft's exciting new ASP.NET Core technologies. Unlike competitive books that focus primarily on ASP.NET Core's cross-platform capabilities or only what's changed from earlier versions, Esposito offers a complete learning path for every developer who wants to build production solutions. Esposito's expert coverage includes: Applying all key ASP.NET Core components, including MVC for HTML generation, .NET Core, EF Core, ASP.NET Identity, dependency injection, and more Integrating ASP.NET Core with leading client-side frameworks, including Bootstrap ASP.NET Core code for implementing business logic and data transformations Handling configuration, routing, controllers, views, and common tasks (including posting forms and presenting data) Performing complementary tasks: error handling, logging, application design, authentication, localization, and more Front-end development: ensuring responsiveness, creating mobile views, and providing advanced interactivity Middleware, data access, runtime architecture, and deployment Taking full advantage of the brand-new ASP.NET Core runtime

"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.

Get up to speed with the latest features of C# 8, ASP.NET Core 3 and .NET Core 3.1 LTS to create robust and maintainable web services Key Features Apply design patterns and techniques to achieve a reactive, scalable web service Document your web services using the OpenAPI standard and test them using Postman Explore mechanisms to implement a secure web service using client-side SSL and token authentication Book Description In recent times, web services have evolved to play a prominent role in web development. Applications are now designed to be compatible with any device and platform, and web services help us keep their logic and UI separate. Given its simplicity and effectiveness in creating web services, the RESTful approach has gained popularity, and this book will help you build RESTful web services using ASP.NET Core. This REST book begins by introducing you to the basics of the REST philosophy, where you'll study the different stages of designing and implementing enterprise-grade RESTful web services. You'll also gain a thorough understanding of ASP.NET Core's middleware approach and learn how to customize it. The book will later guide you through improving API resilience, securing your service, and applying different design patterns and techniques to achieve a scalable

web service. In addition to this, you'll learn advanced techniques for caching, monitoring, and logging, along with implementing unit and integration testing strategies. In later chapters, you will deploy your REST web services on Azure and document APIs using Swagger and external tools such as Postman. By the end of this book, you will have learned how to design RESTful web services confidently using ASP.NET Core with a focus on code testability and maintainability. What you will learn Gain a comprehensive working knowledge of ASP.NET Core Integrate third-party tools and frameworks to build maintainable and efficient services Implement patterns using dependency injection to reduce boilerplate code and improve flexibility Use ASP.NET Core's out-of-the-box tools to test your applications Use Docker to run your ASP.NET Core web service in an isolated and self-contained environment Secure your information using HTTPS and token-based authentication Integrate multiple web services using resiliency patterns and messaging techniques Who this book is for This book is for anyone who wants to learn how to build RESTful web services with the ASP.NET Core framework to improve the scalability and performance of their applications. Basic knowledge of C# and .NET Core will help you make the best use of the code samples included in the book.

Learn to implement ASP.NET Core features to build effective software that can be scaled and maintained easily Key Features Practical solutions to recurring issues in the web development world Recipes on the latest features of ASP.Net Core 2.0 Coverage of Bootstrap, Angular, and JavaScript lets you supercharge your frontend Book Description The ASP.NET Core 2.0 Framework has been designed to meet all the needs of today's web developers. It provides better control, support for test-driven development, and cleaner code. Moreover, it's lightweight and allows you to run apps on Windows, OSX and Linux, making it the most popular web framework with modern day developers. This book takes a unique approach to web development, using real-world examples to guide you through problems with ASP.NET Core 2.0 web applications. It covers Visual Studio 2017- and ASP.NET Core 2.0-specific changes and provides general MVC development recipes. It explores setting up .NET Core, Visual Studio 2017, Node.js modules, and NuGet. Next, it shows you how to work with Inversion of Control data pattern and caching. We explore everyday ASP.NET Core MVC 2.0 patterns and go beyond it into troubleshooting. Finally, we lead you through migrating, hosting, and deploying your code. By the end of the book, you'll not only have explored every aspect of ASP.NET Core MVC 2.0, you'll also have a reference you can keep coming back to whenever you need to get the job done. What you will learn Build ASP.Net Core 2.0 applications using HTTP services with WebApi Learn to unit-test, load test, and perform test applications using client-side and server-side frameworks Debug, monitor and troubleshoot ASP.Net Core 2.0 applications using popular tools Reuse components with NuGet and create modular components with middleware Create applications using client-side technologies such as HTML5, JavaScript, jQuery, and Angular Build responsive and dynamic UIs for your MVC apps using Bootstrap Leverage tools like Karma, Jasmine, QUnit, xUnit, Selenium, Microsoft Fakes, and Visual Studio 2017 Enterprise Who this book is for This book is written for the ASP.NET developer who wants to deliver professional-standard software, quickly and efficiently. It's filled with hands-on recipes, practical advice, and guidance to help developers with every aspect of the ASP.NET development cycle. Whether you've just started out or are a seasoned pro, the Asp.Net Core 2.0 Cookbook is written for you.

Summary Reactive Applications with Akka.NET is a hands-on book that builds on fundamental concepts to teach you how to create reliable and resilient applications in the reactive style. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Enterprise-scale software needs to be unfailingly reliable, consistently performant under unpredictable loads, and easy to scale and maintain. Reactive applications guarantee these qualities through clear isolation of system components and message-based communication. Akka.NET ports the battle-tested Akka Actors toolkit from the JVM, radically simplifying the concurrency and asynchronous message handling at the heart of a reactive system. About the Book Reactive Applications with Akka.NET teaches you to write high-performance, concurrent systems without explicitly managing threads and locking. You'll experience the power of Akka.NET and the Actors concurrency model by exploring a real-world case study in each chapter. As you go further, you'll start to grok the power of asynchronous communication in a distributed environment and take on practical tasks like deploying, debugging, and establishing performance guarantees. What's Inside Reactive application design Dealing with application-level failures Integrating Akka.NET with other frameworks Applying reactive programming to the real world About the Reader Readers should be comfortable with C# or F# and the .NET framework. About the Author Anthony Brown is a .NET consultant specializing in F# and reactive systems. Table of Contents PART 1 THE ROAD TO REACTIVE Why reactive? Reactive application design PART 2 DIGGING IN Your first Akka.NET application State, behavior, and actors Configuration, dependency injection, and logging Failure handling Scaling in reactive systems Composing actor systems PART 3 REAL-LIFE USAGE Testing Akka.NET actors Integrating Akka.NET Storing actor state with Akka.Persistence Building clustered applications with Akka.Cluster Akka.NET and reactive programming in production

Design and build Web APIs for a broad range of clients—including browsers and mobile devices—that can adapt to change over time. This practical, hands-on guide takes you through the theory and tools you need to build evolvable HTTP services with Microsoft's ASP.NET Web API framework. In the process, you'll learn how design and implement a real-world Web API. Ideal for experienced .NET developers, this book's sections on basic Web API theory and design also apply to developers who work with other development stacks such as Java, Ruby, PHP, and Node. Dig into HTTP essentials, as well as API development concepts and styles Learn ASP.NET Web API fundamentals, including the lifecycle of a request as it travels through the framework Design the Issue Tracker API example, exploring topics such as hypermedia support with collection+json Use behavioral-driven development with ASP.NET Web API to implement and enhance the application Explore techniques for building clients that are resilient to change, and make it easy to consume hypermedia APIs Get a comprehensive reference on how ASP.NET Web API works under the hood, including security and testability

Microsoft's ASP.NET Core is a powerful web framework full of hidden features that this book will help you to understand. You'll get hands-on with customizing ASP.NET Core to suit your application development needs with the help of practical examples and best practices.

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.

Dependency Injection In .Net

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.

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.

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.

This concise guide for experienced programmers and software architects is a complete no-nonsense overview of key elements and programming languages central to all .NET application development.

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