

Professional Asp Net Design Patterns

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Beginning SOLID Principles and Design Patterns for ASP.NET Developers - Bipin Joshi 2016-04-08

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

ASP.NET applications How to use Gang of Four (GoF) design patterns in ASP.NET applications Techniques for applying Patterns of Enterprise Application Architecture cataloged by Martin Fowler in ASP.NET applications How to organize code and apply design patterns in JavaScript Who This Book Is For:This book is for ASP.NET developers familiar with ASP.NET Core 1.0, C# and Visual Studio.

Professional ASP.NET MVC 3 - Jon Galloway 2011-07-22

New edition of the top book on MVC from the top ASP.NET experts at Microsoft! MVC 3.0 is the latest update to Microsoft's Model-View-Controller technology, which enables developers to build dynamic, data-driven web sites. This in-depth book shows you step by step how to use MVC 3.0. Written by top ASP.NET MVC experts at Microsoft, the latest edition of this popular book covers new and updated features such as the new View engine, Razor, NuGet, and much more. The book's practical tutorials reinforce concepts and allow you create real-world applications. Topics include controllers and actions, forms and HTML helpers, Ajax, unit testing, and much more. Shows developers and programmers how to use ASP.NET MVC 3.0, Microsoft's new version of its Model-View-Controller technology for developing dynamic, data-driven web sites Features an expert author team?all are members of Microsoft's ASP.NET team Uses a step-by-step approach to explain all major features and

functionalities and provides practical tutorials to allow you to create real-world applications. Goes into theory as well as practical application and covers such topics as Razor, NuGet (PowerShell inside Visual Studio 2010), and new layout features. Move your development skills to the next level with MVC 3.0 and Professional ASP.NET MVC 3.0.

Professional ASP.NET Design Patterns - Scott Millett 2010-09-16

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

Hands-On Design Patterns with C# and .NET Core - Gaurav Arora 2019-07-05

Apply design patterns to solve problems in software architecture and programming using C# 7.x and .NET Core 2. Key Features: Enhance your programming skills by implementing efficient design patterns for C# and .NET. Explore design patterns for functional and reactive programming to build robust and scalable applications. Discover how to work effectively with microservice and serverless architectures. Book Description: Design patterns are essentially reusable solutions to common programming problems. When used correctly, they meet crucial software requirements with ease and reduce costs. This book will uncover effective ways to use design patterns and demonstrate their implementation with executable code specific to both C# and .NET Core. Hands-On Design Patterns with C# and .NET Core begins with an overview of object-oriented programming (OOP) and SOLID principles. It provides an in-depth explanation of the Gang of Four (GoF) design patterns such as creational,

structural, and behavioral. The book then takes you through functional, reactive, and concurrent patterns, helping you write better code with streams, threads, and coroutines. Toward the end of the book, you'll learn about the latest trends in architecture, exploring design patterns for microservices, serverless, and cloud native applications. You'll even understand the considerations that need to be taken into account when choosing between different architectures such as microservices and MVC. By the end of the book, you will be able to write efficient and clear code and be comfortable working on scalable and maintainable projects of any size. What you will learn: Make your code more flexible by applying SOLID principles. Follow the Test-driven development (TDD) approach in your .NET Core projects. Get to grips with efficient database migration, data persistence, and testing techniques. Convert a console application to a web application using the right MVP. Write asynchronous, multithreaded, and parallel code. Implement MVVM and work with RxJS and AngularJS to deal with changes in databases. Explore the features of microservices, serverless programming, and cloud computing. Who this book is for: If you have a basic understanding of C# and the .NET Core framework, this book will help you write code that is easy to reuse and maintain with the help of proven design patterns that you can implement in your code.

Entity Framework Core in Action - Jon Smith 2018-07-15

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

Professional Refactoring in C# & ASP.NET - Danijel Arsenovski
2009-04-08

Refactoring is an effective way to quickly uncover problematic code and fix it. In this first book to provide a hands-on approach to refactoring in C# and ASP.NET, you'll discover to apply refactoring techniques to manage and modify your code. Plus, you'll learn how to build a prototype application from scratch and discover how to refactor the prototype into

a properly designed, enterprise-level application. With the help of step-by-step directions, you'll gain a better understanding of different code issues and refactoring transformations. Many of these transformations are developed from real-world scenarios that are the result of key business decisions. In addition, you'll find formal definitions of refactoring techniques that you'll be able to refer to while on the job. This book covers the refactoring techniques that will enable you to become more efficient and productive. You'll be able to use this information to respond to change and improve the design of existing code. What you will learn from this book How to assemble your own refactoring toolkit Techniques for performing unit testing Tips on refactoring to patterns How to use refactoring to upgrade legacy C# and ASP.NET code Ways to take advantage of the method extraction to eliminate duplicated code How to make code simpler, easier to modify, and more understandable All about object oriented theory and design patterns Methods for using LINQ and other C# 3.0 enhancements Who this book is for This book is for C# and ASP.NET developers who want to learn how to effectively manage and modify their code with refactoring tools and features. Wrox Professional guides are planned and written by working programmers to meet the real-world needs of programmers, developers, and IT professionals. Focused and relevant, they address the issues technology professionals face every day. They provide examples, practical solutions, and expert education in new technologies, all designed to help programmers do a better job.

Patterns, Principles, and Practices of Domain-Driven Design - Scott Millett 2015-04-20

Methods for managing complex software construction following the practices, principles and patterns of Domain-Driven Design with code examples in C# This book presents the philosophy of Domain-Driven Design (DDD) in a down-to-earth and practical manner for experienced developers building applications for complex domains. A focus is placed on the principles and practices of decomposing a complex problem space as well as the implementation patterns and best practices for shaping a maintainable solution space. You will learn how to build effective domain

models through the use of tactical patterns and how to retain their integrity by applying the strategic patterns of DDD. Full end-to-end coding examples demonstrate techniques for integrating a decomposed and distributed solution space while coding best practices and patterns advise you on how to architect applications for maintenance and scale. Offers a thorough introduction to the philosophy of DDD for professional developers Includes masses of code and examples of concept in action that other books have only covered theoretically Covers the patterns of CQRS, Messaging, REST, Event Sourcing and Event-Driven Architectures Also ideal for Java developers who want to better understand the implementation of DDD

Professional ASP.NET Design Patterns - Scott Millett 2010-09-09

Professional ASP.NET Design Patterns is all about showing you how to use the power of design patterns and core design principles in real ASP.NET applications. The goal of this book is to educate developers on the fundamentals of object oriented programming, design patterns, principles, and methodologies that can help you become a better programmer. Design patterns and principles enable loosely coupled and highly cohesive code, which will improve your code's readability, flexibility, and maintenance. Each chapter addresses a layer in an enterprise ASP.NET application and shows how proven patterns, principles, and best practices can be leveraged to solve problems and improve the design of your code. In addition, a professional-level, end-to-end case study is used to show how to use best practice design patterns and principles in a real website. Professional ASP.NET Design Patterns is for ASP.NET developers who are comfortable with the .NET framework but are looking to improve how they code and understand why design patterns, design principles, and best practices will make their code more maintainable and adaptable. Readers who have had experience with design patterns before may wish to skip Part 1 of the book, which acts as an introduction to the Gang of Four design patterns and common design principles, including the S.O.L.I.D. principles and Martin Fowler's enterprise patterns. All code samples are written in C# but the concepts can be applied very easily to VB.NET. This book covers well-known

patterns and best practices for developing enterprise-level ASP.NET applications. The patterns used can be applied to any version of ASP.NET from 1.0 to 4.0. The patterns themselves are language agnostic and can be applied to any object oriented programming language. Professional ASP.NET Design Patterns can be used both as a step-by-step guide and as a continuous source of reference to dip into at your leisure. The book is broken into three distinct sections. Part 1 is an introduction to patterns and design principles. Part 2 examines how patterns and principles can be used in the various layers of an ASP.NET application. Part 3 represents an end-to-end case study showcasing many of the patterns covered in the book. You may find it useful to work through the chapters before reading the case study, or you may find it easier to see the patterns in action by reading the case study section first and referring back to Part 2 for a more detailed view on the patterns and principles used. Within those parts the coverage includes: The origins of the Gang of Four design patterns, their relevance in today's world, and their decoupling from specific programming languages. An overview of some common design principles and the S.O.L.I.D. design principles follows, and the chapter ends with a description of Fowler's enterprise patterns. Layering Your Application and Separating Your Concerns A description of the Transaction Script pattern followed by the Active Record, with an exercise to demonstrate the pattern using the Castle Windsor project. The Domain Model pattern demonstrated in an exercise with NHibernate and a review of the domain-driven design (DDD) methodology Patterns and principles that can be used construct your objects and how to make sure that you are building your application for scalability and maintainability: Factory, Decorator, Template, State, Strategy, Composite, Specification and Layer Supertype. Design principles that can improve your code's maintainability and flexibility; these include Dependency Injection, Interface Segregation, and Liskov Substitution Principle Service Oriented Architecture, the Facade design pattern, messaging patterns such as Document Message, Request-Response, Reservation, and the Idempotent pattern The Data Access Layer: Two data access strategies are demonstrated to help organize

your persistence layer: Repository and Data Access Objects. Enterprise patterns and principles that will help you fulfill your data access requirement needs elegantly, including Lazy Loading, Identity Map, Unit of Work, and the Query Object. An introduction to Object Relational Mappers and the problems they solve. An enterprise Domain Driven exercise with POCO business entities utilizing both NHibernate and the MS Entity Framework. The Presentation Layer: how you can tie your loosely coupled code together Structure Map and an Inversion of Control container. Presentation patterns, including letting the view be in charge with the Model-View-Presenter pattern and ASP.NET web forms, the Front Controller presentation pattern utilizing the Command and Chain of Responsibility patterns, as well as the Model-View-Controller Pattern implemented with the ASP.NET MVC framework and Windsor's Castle Monorail framework. The final presentation pattern covered is PageController as used in ASP.NET web forms. A pattern that can be used with organizational patterns, namely the ViewModel pattern and how to automate domain entities to ViewModel mapping with AutoMapper The User Experience Layer: AJAX, JavaScript libraries, including jQuery. AJAX patterns: Ajax Periodic Refresh and Timeout patterns, maintaining history with the Unique URL pattern, client side data binding with JTemplate, and the Ajax Predictive Fetch pattern An end-to-end e-commerce store case study with ASP.NET MVC, NHibernate, jQuery, Json, AutoMapper, ASP.NET membership provider and a second 3rd party authentication method, and PayPal as a payment merchant

Visual Basic Design Patterns - Mark Grand 2005-07-29

Design Patterns are a type of pattern used in the initial design phase of an object-oriented development project Documents 46 Visual Basic .NET design patterns, including 20 that have never before been published Features case studies that demonstrate how to use design patterns effectively in the real world-and even explains where not to use design patterns Companion Web site includes all code and UML models from the book as well as links to appropriate software downloads

Professional ASP.NET Design Patterns - Scott Millett 2010-09-28

Professional ASP.NET Design Patterns is all about showing you how to use the power of design patterns and core design principles in real ASP.NET applications. The goal of this book is to educate developers on the fundamentals of object oriented programming, design patterns, principles, and methodologies that can help you become a better programmer. Design patterns and principles enable loosely coupled and highly cohesive code, which will improve your code's readability, flexibility, and maintenance. Each chapter addresses a layer in an enterprise ASP.NET application and shows how proven patterns, principles, and best practices can be leveraged to solve problems and improve the design of your code. In addition, a professional-level, end-to-end case study is used to show how to use best practice design patterns and principles in a real website. Professional ASP.NET Design Patterns is for ASP.NET developers who are comfortable with the .NET framework but are looking to improve how they code and understand why design patterns, design principles, and best practices will make their code more maintainable and adaptable. Readers who have had experience with design patterns before may wish to skip Part 1 of the book, which acts as an introduction to the Gang of Four design patterns and common design principles, including the S.O.L.I.D. principles and Martin Fowler's enterprise patterns. All code samples are written in C# but the concepts can be applied very easily to VB.NET. This book covers well-known patterns and best practices for developing enterprise-level ASP.NET applications. The patterns used can be applied to any version of ASP.NET from 1.0 to 4.0. The patterns themselves are language agnostic and can be applied to any object oriented programming language. Professional ASP.NET Design Patterns can be used both as a step-by-step guide and as a continuous source of reference to dip into at your leisure. The book is broken into three distinct sections. Part 1 is an introduction to patterns and design principles. Part 2 examines how patterns and principles can be used in the various layers of an ASP.NET application. Part 3 represents an end-to-end case study showcasing many of the patterns covered in the book. You may find it useful to work through the chapters before reading the case study, or you may find it easier to see

the patterns in action by reading the case study section first and referring back to Part 2 for a more detailed view on the patterns and principles used. Within those parts the coverage includes: The origins of the Gang of Four design patterns, their relevance in today's world, and their decoupling from specific programming languages. An overview of some common design principles and the S.O.L.I.D. design principles follows, and the chapter ends with a description of Fowler's enterprise patterns. Layering Your Application and Separating Your Concerns A description of the Transaction Script pattern followed by the Active Record, with an exercise to demonstrate the pattern using the Castle Windsor project. The Domain Model pattern demonstrated in an exercise with NHibernate and a review of the domain-driven design (DDD) methodology Patterns and principles that can be used construct your objects and how to make sure that you are building your application for scalability and maintainability: Factory, Decorator, Template, State, Strategy, Composite, Specification and Layer Supertype. Design principles that can improve your code's maintainability and flexibility; these include Dependency Injection, Interface Segregation, and Liskov Substitution Principle Service Oriented Architecture, the Facade design pattern, messaging patterns such as Document Message, Request-Response, Reservation, and the Idempotent pattern The Data Access Layer: Two data access strategies are demonstrated to help organize your persistence layer: Repository and Data Access Objects. Enterprise patterns and principles that will help you fulfill your data access requirement needs elegantly, including Lazy Loading, Identity Map, Unit of Work, and the Query Object. An introduction to Object Relational Mappers and the problems they solve. An enterprise Domain Driven exercise with POCO business entities utilizing both NHibernate and the MS Entity Framework. The Presentation Layer: how you can tie your loosely coupled code together Structure Map and an Inversion of Control container. Presentation patterns, including letting the view be in charge with the Model-View-Presenter pattern and ASP.NET web forms, the Front Controller presentation pattern utilizing the Command and Chain of Responsibility patterns, as well as the Model-View-Controller Pattern

implemented with the ASP.NET MVC framework and Windsor's Castle Monorail framework. The final presentation pattern covered is PageController as used in ASP.NET web forms. A pattern that can be used with organizational patterns, namely the ViewModel pattern and how to automate domain entities to ViewModel mapping with AutoMapper The User Experience Layer: AJAX, JavaScript libraries, including jQuery. AJAX patterns: Ajax Periodic Refresh and Timeout patterns, maintaining history with the Unique URL pattern, client side data binding with JTemplate, and the Ajax Predictive Fetch pattern An end-to-end e-commerce store case study with ASP.NET MVC, NHibernate, jQuery, Json, AutoMapper, ASP.NET membership provider and a second 3rd party authentication method, and PayPal as a payment merchant

Professional ASP.NET MVC 4 - Jon Galloway 2012-09-17

An outstanding author team presents the ultimate Wrox guide to ASP.NET MVC 4 Microsoft insiders join giants of the software development community to offer this in-depth guide to ASP.NET MVC, an essential web development technology. Experienced .NET and ASP.NET developers will find all the important information they need to build dynamic, data-driven websites with ASP.NET and the newest release of Microsoft's Model-View-Controller technology. Featuring step-by-step guidance and lots of code samples, this guide gets you started and moves all the way to advanced topics, using plenty of examples. Designed to give experienced .NET and ASP.NET programmers everything needed to work with the newest version of MVC technology Expert author team includes Microsoft ASP.NET MVC insiders as well as leaders of the programming community Covers controllers, views, models, forms and HTML helpers, data annotation and validation, membership, authorization, security, and routing Includes essential topics such as Ajax and jQuery, NuGet, dependency injection, unit testing, extending MVC, and Razor Includes additional real-world coverage requested by readers of the previous edition as well as a new case study example chapter

Dependency Injection In.Net - Mark Seemann

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.

Pro ASP.NET MVC 4 - Adam Freeman 2013-01-29

The ASP.NET MVC 4 Framework is the latest evolution of Microsoft's ASP.NET web platform. It provides a high-productivity programming model that promotes cleaner code architecture, test-driven development, and powerful extensibility, combined with all the benefits of ASP.NET. ASP.NET MVC 4 contains a number of significant advances over previous versions. New mobile and desktop templates (employing adaptive rendering) are included together with support for jQuery Mobile for the first time. New display modes allow your application to select views based on the browser that's making the request while Code Generation Recipes for Visual Studio help you auto-generate project-specific code for a wide variety of situations including NuGet support. In this fourth edition, the core model-view-controller (MVC) architectural concepts are not simply explained or discussed in isolation, but are demonstrated in action. You'll work through an extended tutorial to create a working e-commerce web application that combines ASP.NET MVC with the latest C# language features and unit-testing best practices. By gaining this invaluable, practical experience, you'll discover MVC's strengths and weaknesses for yourself—and put your best-learned theory into practice. The book's authors, Steve Sanderson and Adam Freeman, have both watched the growth of ASP.NET MVC since its first release. Steve is a well-known blogger on the MVC Framework and a member of the

Microsoft Web Platform and Tools team. Adam started designing and building web applications 15 years ago and has been responsible for some of the world's largest and most ambitious projects. You can be sure you are in safe hands.

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

C# 8.0 and .NET Core 3.0 - Modern Cross-Platform Development -

Mark J. Price 2019-10-31

Publisher's Note: Microsoft ceased support for .NET Core 3.0 in March 2020. A new edition of this book is available that uses .NET 6 (an LTS release with support up until November 2024), C# 10, and Visual Studio 2022, as well as Visual Studio Code. Key Features Build modern, cross-platform applications with .NET Core 3.0 Get up to speed with C#, and up to date with all the latest features of C# 8.0 Start creating professional web applications with ASP.NET Core 3.0 Book Description In C# 8.0 and .NET Core 3.0 - Modern Cross-Platform Development, Fourth Edition, expert teacher Mark J. Price gives you everything you need to start programming C# applications. This latest edition uses the popular Visual Studio Code editor to work across all major operating systems. It is fully updated and expanded with new chapters on Content Management Systems (CMS) and machine learning with ML.NET. The book covers all the topics you need. Part 1 teaches the fundamentals of C#, including object-oriented programming, and new C# 8.0 features such as nullable reference types, simplified switch pattern matching, and default interface methods. Part 2 covers the .NET Standard APIs, such as managing and querying data, monitoring and improving performance, working with the filesystem, async streams, serialization, and encryption. Part 3 provides examples of cross-platform applications you can build and deploy, such as web apps using ASP.NET Core or mobile apps using Xamarin.Forms. The book introduces three technologies for building Windows desktop applications including Windows Forms, Windows Presentation Foundation (WPF), and Universal Windows Platform (UWP) apps, as well as web applications, web services, and mobile apps. What you will learn Build cross-platform applications for Windows, macOS, Linux, iOS, and Android Explore application development with C# 8.0 and .NET Core 3.0 Explore ASP.NET Core 3.0 and create professional web applications Learn object-oriented programming and C# multitasking Query and manipulate data using LINQ Use Entity Framework Core and work with relational databases Discover Windows app development using the Universal Windows Platform and XAML Build

mobile applications for iOS and Android using Xamarin.Forms Who this book is for Readers with some prior programming experience or with a science, technology, engineering, or mathematics (STEM) background, who want to gain a solid foundation with C# 8.0 and .NET Core 3.0.

.NET Design Patterns - Praseed Pai 2017-01-31

Explore the world of .NET design patterns and bring the benefits that the right patterns can offer to your toolkit today About This Book Dive into the powerful fundamentals of .NET framework for software development The code is explained piece by piece and the application of the pattern is also showcased. This fast-paced guide shows you how to implement the patterns into your existing applications Who This Book Is For This book is for those with familiarity with .NET development who would like to take their skills to the next level and be in the driver's seat when it comes to modern development techniques. Basic object-oriented C# programming experience and an elementary familiarity with the .NET framework library is required. What You Will Learn Put patterns and pattern catalogs into the right perspective Apply patterns for software development under C#/.NET Use GoF and other patterns in real-life development scenarios Be able to enrich your design vocabulary and well articulate your design thoughts Leverage object/functional programming by mixing OOP and FP Understand the reactive programming model using Rx and RxJs Writing compositional code using C# LINQ constructs Be able to implement concurrent/parallel programming techniques using idioms under .NET Avoiding pitfalls when creating compositional, readable, and maintainable code using imperative, functional, and reactive code. In Detail Knowing about design patterns enables developers to improve their code base, promoting code reuse and making their design more robust. This book focuses on the practical aspects of programming in .NET. You will learn about some of the relevant design patterns (and their application) that are most widely used. We start with classic object-oriented programming (OOP) techniques, evaluate parallel programming and concurrency models, enhance implementations by mixing OOP and functional programming, and finally to the reactive programming model where functional programming and OOP are used in

synergy to write better code. Throughout this book, we'll show you how to deal with architecture/design techniques, GoF patterns, relevant patterns from other catalogs, functional programming, and reactive programming techniques. After reading this book, you will be able to convincingly leverage these design patterns (factory pattern, builder pattern, prototype pattern, adapter pattern, facade pattern, decorator pattern, observer pattern and so on) for your programs. You will also be able to write fluid functional code in .NET that would leverage concurrency and parallelism! Style and approach This tutorial-based book takes a step-by-step approach. It covers the major patterns and explains them in a detailed manner along with code examples.

NET Programming - Pradeep Kumar Tapadiya 2002

Tapadiya takes a straightforward, hands-on approach to explain everything readers need to know from development to deployment and maintenance for this platform--all from a developer's perspective. Using C# as the primary language, and with plenty of code examples throughout, this book is an excellent way to learn.

Angular Design Patterns - Mathieu Nayrolles 2018-07-30

Make the most of Angular by leveraging design patterns and best practices to build stable and high performing apps Key Features Get to grips with the benefits and applicability of using different design patterns in Angular with the help of real-world examples Identify and prevent common problems, programming errors, and anti-patterns Packed with easy-to-follow examples that can be used to create reusable code and extensible designs Book Description This book is an insightful journey through the most valuable design patterns, and it will provide clear guidance on how to use them effectively in Angular. You will explore some of the best ways to work with Angular and how to use it to meet the stability and performance required in today's web development world. You'll get to know some Angular best practices to improve your productivity and the code base of your application. We will take you on a journey through Angular designs for the real world, using a combination of case studies, design patterns to follow, and anti-patterns to avoid. By the end of the book, you will understand the various features of Angular,

and will be able to apply well-known, industry-proven design patterns in your work. What you will learn Understand Angular design patterns and anti-patterns Implement the most useful GoF patterns for Angular Explore some of the most famous navigational patterns for Angular Get to know and implement stability patterns Explore and implement operations patterns Explore the official best practices for Angular Monitor and improve the performance of Angular applications Who this book is for If you want to increase your understanding of Angular and apply it to real-life application development, then this book is for you.

Learning JavaScript Design Patterns - Addy Osmani 2012-07-08
With *Learning JavaScript Design Patterns*, you'll learn how to write beautiful, structured, and maintainable JavaScript by applying classical and modern design patterns to the language. If you want to keep your code efficient, more manageable, and up-to-date with the latest best practices, this book is for you. Explore many popular design patterns, including Modules, Observers, Facades, and Mediators. Learn how modern architectural patterns—such as MVC, MVP, and MVVM—are useful from the perspective of a modern web application developer. This book also walks experienced JavaScript developers through modern module formats, how to namespace code effectively, and other essential topics. Learn the structure of design patterns and how they are written Understand different pattern categories, including creational, structural, and behavioral Walk through more than 20 classical and modern design patterns in JavaScript Use several options for writing modular code—including the Module pattern, Asynchronous Module Definition (AMD), and CommonJS Discover design patterns implemented in the jQuery library Learn popular design patterns for writing maintainable jQuery plug-ins "This book should be in every JavaScript developer's hands. It's the go-to book on JavaScript patterns that will be read and referenced many times in the future."—Andrée Hansson, Lead Front-End Developer, presis!

Framework Design Guidelines - Krzysztof Cwalina 2008-10-22

This is the eBook version of the print title, *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.

Professional Enterprise .NET - Jon Arking 2010-12-30

Comprehensive coverage to help experienced .NET developers create flexible, extensible enterprise application code If you're an experienced Microsoft .NET developer, you'll find in this book a road map to the latest enterprise development methodologies. It covers the tools you will use in addition to Visual Studio, including Spring.NET and nUnit, and applies to development with ASP.NET, C#, VB, Office (VBA), and database. You will find comprehensive coverage of the tools and practices that professional .NET developers need to master in order to build enterprise more flexible, testable, and extensible .NET applications with minimal upfront costs. Helps C#, VB.Net, and ASP.NET developers who wish to migrate both their applications and their own skillsets to newer, more flexible enterprise methodologies Describes each new pattern or feature along with its benefits, then outlines the pros and cons of its implementation Includes an introduction to enterprise development and a comprehensive overview of the differences between new enterprise patterns and older, traditional Microsoft programming Explains how to implement these patterns by upgrading an existing code base Covers benefits including flexibility, automated testing, extensibility, and separation; modular code; test-driven development, unit test, test automation, and refactoring; inversion of control; and object relational mapping Also covers enterprise design patterns: MVC including Ruby on Rails, Monorail, and ASP.NET MVC, MVP, observer, and more Contains a primer on object-oriented design Professional Enterprise .NET focuses on the often-inevitable compromise between forward-thinking design and the needs of business, helping you build applications that serve both. *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

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

Using research in neurobiology, cognitive science and learning theory,

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

Professional ASP.NET MVC 1.0 - Rob Conery 2009-07-01

This book begins with you working along as Scott Guthrie builds a complete ASP.NET MVC reference application. He begins NerdDinner by using the File->New Project menu command within Visual Studio to create a new ASP.NET MVC Application. You'll then incrementally add functionality and features. Along the way you'll cover how to create a database, build a model layer with business rule validations, implement listing/details data browsing, provide CRUD (Create, Update, Delete) data form entry support, implement efficient data paging, reuse UI using master pages and partials, secure the application using authentication and authorization, use AJAX to deliver dynamic updates and interactive map support, and implement automated unit testing. From there, the bulk of the rest of the book begins with the basic concepts around the model view controller pattern, including the little history and the state of the MVC on the web today. We'll then go into the ways that MVC is different from ASP.NET Web Forms. We'll explore the structure of a standard MVC application and see what you get out of the box. Next we dig deep into routing and see the role URLs play in your application. We'll deep dive into controllers and views and see what role the Ajax plays in your applications. The last third of the book focuses entirely on advanced techniques and extending the framework. In some places, we assume that you're somewhat familiar with ASP.NET WebForms, at least peripherally. There are a lot of ASP.NET WebForms developers out there who are interested in ASP.NET MVC so there are a number of places in this book where we contrast the two technologies. Even if you're not already an ASP.NET developer, you might still find these sections interesting for context, as well as for your own edification as ASP.NET MVC may not be the web technology that you're looking for.

Professional ASP.NET 1.0 - Richard Anderson 2002-02-22

What is this book about? This comprehensive compendium provides a

broad and thorough investigation of all aspects of programming with ASP.NET. Entirely revised and updated for the 1.0 Release of .NET, this book will give you the information you need to master ASP.NET and build dynamic, successful, enterprise Web applications. What does this book cover? Here are just a few of the topics covered in this book: What ASP.NET is, and how it makes building applications even easier How easy it is to work with ASP.NET pages and server-side controls Accessing data of all kinds in your ASP.NET pages An introduction to ADO.NET Getting started with ASP.NET and the .NET Framework Creating ASP.NET pages, working with server controls, and data management Developing, securing, and configuring web applications Exploring Base class libraries, components, and extensibility Working with Web Services and ASP.NET in the mobile arena Debugging, performance, migration, and interoperability Integrating this knowledge in real world development contexts Who is this book for? This book is aimed at experienced ASP developers working at the leading edge — rather than the casual ASP developer or beginner. We do not cover the basics of COM, ASP, or the .NET programming languages. This book is also ideal for Visual Basic developers who want to move into Web application design. What do you need to use this book? Here's what you need to know in order to use this book: A solid understanding of ASP Familiarity with VB or C-based syntax (C++, Java(TM), or C#) A desire to develop sophisticated ASP.NET applications using the .NET Framework A desire for a comprehensive and in-depth guide to this exciting new technology

Applying Domain-Driven Design and Patterns - Jimmy Nilsson
2006-05-08

Patterns, Domain-Driven Design (DDD), and Test-Driven Development (TDD) enable architects and developers to create systems that are powerful, robust, and maintainable. Now, there's a comprehensive, practical guide to leveraging all these techniques primarily in Microsoft .NET environments, but the discussions are just as useful for Java developers. Drawing on seminal work by Martin Fowler (Patterns of Enterprise Application Architecture) and Eric Evans (Domain-Driven Design), Jimmy Nilsson shows how to create real-world architectures for

any .NET application. Nilsson illuminates each principle with clear, well-annotated code examples based on C# 1.1 and 2.0. His examples and discussions will be valuable both to C# developers and those working with other .NET languages and any databases—even with other platforms, such as J2EE. Coverage includes · Quick primers on patterns, TDD, and refactoring · Using architectural techniques to improve software quality · Using domain models to support business rules and validation · Applying enterprise patterns to provide persistence support via NHibernate · Planning effectively for the presentation layer and UI testing · Designing for Dependency Injection, Aspect Orientation, and other new paradigms

Search Patterns - Peter Morville 2010-01-14

What people are saying about Search Patterns "Search Patterns is a delight to read -- very thoughtful and thought provoking. It's the most comprehensive survey of designing effective search experiences I've seen." --Irene Au, Director of User Experience, Google "I love this book! Thanks to Peter and Jeffery, I now know that search (yes, boring old yucky who cares search) is one of the coolest ways around of looking at the world." --Dan Roam, author, The Back of the Napkin (Portfolio Hardcover) "Search Patterns is a playful guide to the practical concerns of search interface design. It contains a bonanza of screenshots and illustrations that capture the best of today's design practices and presents a fresh perspective on the broader role of search and discovery." --Marti Hearst, Professor, UC Berkeley and author, Search User Interfaces (Cambridge University Press) "It's not often I come across a book that asks profound questions about a fundamental human activity, and then proceeds to answer those questions with practical observations and suggestions. Search Patterns is an expedition into the heart of the web and human cognition, and for me it was a delightful journey that delivered scores of insights." --Dave Gray, Founder and Chairman, XPLANE "Search is swiftly transforming everything we know, yet people don't understand how mavens design search: by stacking breadcrumbs, scenting widgets, and keeping eyeballs on the engine. I urge you to put your eyeballs on this unique and important book." -- Bruce Sterling, Writer, Futurist, and Co-Founder, The Electronic Frontier

Foundation "As one who searches a lot (and often ends up frustrated), Search Patterns is a revelation." --Nigel Holmes, Designer, Theorist, and Principal, Explanation Graphics "Search Patterns is a fabulous must-have book! Inside, you'll learn the whys and wheres of practically every modern search design trick and technique." --Jared Spool, CEO and Founder, User Interface Engineering Search is among the most disruptive innovations of our time. It influences what we buy and where we go. It shapes how we learn and what we believe. In this provocative and inspiring book, you'll explore design patterns that apply across the categories of web, ecommerce, enterprise, desktop, mobile, social, and real-time search and discovery. Filled with colorful illustrations and examples, Search Patterns brings modern information retrieval to life, covering such diverse topics as relevance, faceted navigation, multi-touch, personalization, visualization, multi-sensory search, and augmented reality. By drawing on their own experience-as well as best practices and evidence-based research-the authors not only offer a practical guide to help you build effective search applications, they also challenge you to imagine the future of discovery. You'll find Search Patterns intriguing and invaluable, whether you're a web practitioner, mobile designer, search entrepreneur, or just interested in the topic. Discover a pattern language for search that embraces user psychology and behavior, information architecture, interaction design, and emerging technology Boost enterprise efficiency and e-commerce sales Enable mobile users to achieve goals, complete tasks, and find what they need Drive design innovation for search interfaces and applications

C# Design Pattern Essentials - Tony Bevis 2012

Once you've learned the fundamentals of C#, understanding Design Patterns is essential for writing clear, concise and effective code. This book gives you a step-by-step guide to object-oriented development, using tried and trusted techniques. The examples have been kept simple, enabling you to concentrate on understanding the concepts and application of each pattern. All examples have been designed around a common theme, making it easier to see how they relate to each other and how you can adapt them to your applications. While the book assumes a

basic knowledge of C# you don't need to be a guru. This book is perfect for the programmer wishing to take their skills to the next level, and feel confident about using C# in real applications. Coverage includes all 23 of the patterns from the "Gang of Four" work, additional patterns including Model-View-Controller, and simple UML diagrams.

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.

Design Patterns - Erich Gamma 1995

Software -- Software Engineering.

Design Patterns in .NET - Dmitri Nesteruk 2019-05-11

Implement design patterns in .NET using the latest versions of the C# and F# languages. This book provides a comprehensive overview of the field of design patterns as they are used in today's developer toolbox. Using the C# programming language, Design Patterns in .NET explores the classic design pattern implementation and discusses the applicability and relevance of specific language features for the purpose of implementing patterns. You will learn by example, reviewing scenarios

where patterns are applicable. MVP and patterns expert Dmitri Nesteruk demonstrates possible implementations of patterns, discusses alternatives and pattern inter-relationships, and illustrates the way that a dedicated refactoring tool (ReSharper) can be used to implement design patterns with ease. What You'll Learn Know the latest pattern implementations available in C# and F# Refer to researched and proven variations of patterns Study complete, self-contained examples including many that cover advanced scenarios Use the latest implementations of C# and Visual Studio/ReSharper Who This Book Is For Developers who have some experience in the C# language and want to expand their comprehension of the art of programming by leveraging design approaches to solving modern problems

[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 HttpClientFactory 22 Building background tasks and services 23 Testing your application

Software Architecture with C# 9 and .NET 5 - Gabriel Baptista 2020-12-28

Design scalable and high-performance enterprise applications using the latest features of C# 9 and .NET 5 Key FeaturesGain fundamental and comprehensive software architecture knowledge and the skillset to create fully modular appsDesign high-performance software systems using the latest features of .NET 5 and C# 9Solve scalability problems in web apps using enterprise architecture patternsBook Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. This fully revised and expanded second edition, featuring the latest features of .NET 5 and C# 9, enables you to acquire the key skills, knowledge, and best practices required to become an

effective software architect. This second edition features additional explanation of the principles of Software architecture, including new chapters on Azure Service Fabric, Kubernetes, and Blazor. It also includes more discussion on security, microservices, and DevOps, including GitHub deployments for the software development cycle. You will begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you will explore how to carefully choose a cloud solution for your infrastructure, along with the factors that will help you manage your app in a cloud-based environment. Finally, you will discover software design patterns and various software approaches that will allow you to solve common problems faced during development. By the end of this book, you will be able to build and deliver highly scalable enterprise-ready apps that meet your organization's business requirements. What you will learn Use different techniques to overcome real-world architectural challenges and solve design consideration issues Apply architectural approaches such as layered architecture, service-oriented architecture (SOA), and microservices Leverage tools such as containers, Docker, Kubernetes, and Blazor to manage microservices effectively Get up to speed with Azure tools and features for delivering global solutions Program and maintain Azure Functions using C# 9 and its latest features Understand when it is best to use test-driven development (TDD) as an approach for software development Write automated functional test cases Get the best of DevOps principles to enable CI/CD environments Who this book is for This book is for engineers and senior software developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Basic familiarity with C# and .NET is required to get the most out of this book.

An Atypical ASP.NET Core 5 Design Patterns Guide - Carl-Hugo Marcotte 2020-12-31

A .NET developer's guide to crafting robust, maintainable, and flexible web apps by leveraging C# 9 and .NET 5 features and component-scale and application-scale design patterns Key Features Apply software design

patterns effectively, starting small and progressing to cloud-scale Discover modern application architectures such as vertical slice, clean architecture, and event-driven microservices Explore ASP.NET design patterns, from options to full-stack web development using Blazor Book Description Design patterns are a set of solutions to many of the common problems occurring in software development. Knowledge of these design patterns helps developers and professionals to craft software solutions of any scale. ASP.NET Core 5 Design Patterns starts by exploring basic design patterns, architectural principles, dependency injection, and other ASP.NET Core mechanisms. You'll explore the component scale as you discover patterns oriented toward small chunks of the software, and then move to application-scale patterns and techniques to understand higher-level patterns and how to structure the application as a whole. The book covers a range of significant GoF (Gangs of Four) design patterns such as strategy, singleton, decorator, facade, and composite. The chapters are organized based on scale and topics, allowing you to start small and build on a strong base, the same way that you would develop a program. With the help of use cases, the book will show you how to combine design patterns to display alternate usage and help you feel comfortable working with a variety of design patterns. Finally, you'll advance to the client side to connect the dots and make ASP.NET Core a viable full-stack alternative. By the end of the book, you'll be able to mix and match design patterns and have learned how to think about architecture and how it works. What you will learn Apply the SOLID principles for building flexible and maintainable software Get to grips with .NET 5 dependency injection Work with GoF design patterns such as strategy, decorator, and composite Explore the MVC patterns for designing web APIs and web applications using Razor Discover layering techniques and tenets of clean architecture Become familiar with CQRS and vertical slice architecture as an alternative to layering Understand microservices, what they are, and what they are not Build ASP.NET UI from server-side to client-side Blazor Who this book is for This design patterns book is for intermediate-level software and web developers with some knowledge of .NET who

want to write flexible, maintainable, and robust code for building scalable web applications. Knowledge of C# programming and an understanding of web concepts like HTTP is necessary.

Implementing Design Patterns in C# and .NET 5 - Alexandre Malavasi 2021-07-31

Implement robust applications by applying efficient Design Patterns with .NET 5 and C#

KEY FEATURES

- Detailed theoretical concepts covered, including the use of encapsulation, interfaces, and inheritance.
- Access to solutions applied for software strategy and final product output.
- Simplified demonstration of real applications implementing numerous design patterns.

DESCRIPTION This book covers detailed aspects of Design Patterns and Object-Oriented Programming concepts using the most modern version of the C# language and .NET platform, including many real-world examples and good practice guidelines that help developers in building robust and extensible applications. The book begins with the essential concepts of C# programming and the .NET platform. You get your foundation strong by understanding SOLID Principles and the actual implementation of reliable applications. You will be working on most common Design Patterns such as Abstract Factory, Adapter, Composite, Proxy, Command, Strategy, Observer, Factory Method, Singleton, Builder, Interpreter, Mediator, and many other patterns that will help you to create solid enterprise applications. You will also witness the performance of these design patterns in a real software development environment with the help of practical examples. After learning the most common Design Patterns practiced in .NET enterprise applications, the reader will be able to understand and apply good practices of software development based on the object-oriented paradigm to develop complex enterprise applications efficiently and simply.

WHAT YOU WILL LEARN

- Fine-tune your knowledge about interfaces, polymorphism, and encapsulation.
- Learn to practice implementing design patterns in enterprise applications.
- Implement rich design patterns: Observer, Strategy, Command, Proxy, and more.
- Get to learn the latest additional design patterns such as Builder, Bridge, and Decorator.
- Includes illustrations, examples, and real use-cases of

.NET 5.0 applications.

WHO THIS BOOK IS FOR This book is for .NET developers, application developers, and software engineers who want to develop .NET applications with proven techniques and build error-free applications. This book also attracts fresh graduates and entry-level developers as long as basic knowledge about .NET is known to them.

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Pro ASP.NET MVC 5 - Adam Freeman 2014-02-28

The ASP.NET MVC 5 Framework is the latest evolution of Microsoft's ASP.NET web platform. It provides a high-productivity programming model that promotes cleaner code architecture, test-driven development, and powerful extensibility, combined with all the benefits of ASP.NET. ASP.NET MVC 5 contains a number of advances over previous versions, including the ability to define routes using C# attributes and the ability to override filters. The user experience of building MVC applications has also been substantially improved. The new, more tightly integrated, Visual Studio 2013 IDE has been created specifically with MVC application development in mind and provides a full suite of tools to improve development times and assist in reporting, debugging and deploying your code. The popular Bootstrap JavaScript library has also now been included natively within MVC 5 providing you, the developer, with a wider range of multi-platform CSS and HTML5 options than ever before without the penalty of having to load-in third party libraries.

Service Design Patterns - Robert Daigneau 2011-10-25

Web services have been used for many years. In this time, developers and architects have encountered a number of recurring design challenges related to their usage, and have learned that certain service design approaches work better than others to solve certain problems. In Service Design Patterns, Rob Daigneau codifies proven design solutions for web services that follow the REST architectural style or leverage the

SOAP/WSDL specifications. This catalogue identifies the fundamental topics in web service design and lists the common design patterns for each topic. All patterns identify the context in which they may be used, explain the constituent design elements, and explore the relative strengths and trade-offs. Code examples are provided to help you better understand how the patterns work but are kept general so that you can see how the solutions may be applied to disparate technologies that will inevitably change in the years to come. This book will help readers answer the following questions: How do you create a web service API, what are the common API styles, and when should a particular style be used? How can clients and web services communicate, and what are the foundations for creating complex conversations in which multiple parties exchange data over extended periods of time? What are the options for implementing web service logic, and when should a particular approach be used? How can clients become less coupled to the underlying systems used by a service? How can information about a web service be discovered? How can generic functions like authentication, validation, caching, and logging be supported on the client or service? What changes to a service cause clients to break? What are the common ways to version a service? How can web services be designed to support the continuing evolution of business logic without forcing clients to constantly upgrade? This book is an invaluable resource for enterprise architects, solution architects, and developers who use web services to create enterprise IT applications, commercial or open source products, and Software as a Service (SaaS) products that leverage emerging Cloud platforms.

Pro HTML5 and CSS3 Design Patterns - Michael Bowers 2012-01-24

Pro HTML5 and CSS3 Design Patterns is a reference book and a cookbook on how to style web pages using CSS3 and HTML5. It contains 350 ready-to-use patterns (CSS3 and HTML5 code snippets) that you

can copy and paste into your code. Each pattern can be combined with other patterns to create an unlimited number of solutions, and each pattern works reliably in all major browsers without the need for browser hacks. The book is completely up-to-date with code, best practices, and browser compatibilities for HTML5 and CSS3—enabling you to dive in and make use of these new technologies in production environments. Pro HTML5 and CSS3 Design Patterns is so much more than just a cookbook, though! It systematically covers every usable feature of CSS3 and combines these features with HTML5 to create reusable patterns. Each pattern has an intuitive name to make it easy to find, remember, and refer to. Accessibility and best practices are carefully engineered into each design pattern, example, and source code. The book's layout, with a pattern's example on the left page and its explanation on the right, makes it easy to find a pattern and study it without having to flip between pages. The book is also readable from cover to cover, with topics building carefully upon previous topics. Pro HTML5 and CSS3 Design Patterns book unleashes your productivity and creativity in web design and development. Instead of hacking your way toward a solution, you'll learn how to predictably create successful designs every time by reusing and combining modular design patterns.

Professional Design Patterns in VB .NET - Chaur Wu 2003-09-15

* Explains through case studies how design patterns can improve the design of the individual tiers in an application. * Shows how design patterns can be used in conjunction with .NET Remoting across the tiers in an application. * The emphasis throughout is on how design patterns can be used in real applications to write more robust and flexible code.

Core J2EE Patterns - Deepak Alur 2003

Explains how to leverage Java's architecture and mechanisms to design enterprise applications and considers code modularity, nonduplication, network efficiency, maintainability, and reusability.