

Professional Asp Net Design Patterns

Learn the fundamentals, practical applications, and latest features of C# 8.0 and .NET Core 3.0 from expert teacher Mark J. Price. 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.

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.

Provides information on building an Ajax-based Web site using ASP.NET 3.5.

Go from beginner to pro using one of the most effective and widely used technology stacks, Microsoft ASP.NET. Beginning with the basics, you will learn how to create interactive, professional-grade, database-driven web applications in no time, using ASP.NET, C#, SQL, Ajax, and JavaScript. Essential ASP.NET Web Forms Development is divided into six learning modules and will take you from soup to nuts with ASP.NET. Part I is an introduction to the major concepts, methodologies, and technologies associated with .NET web application development. You will learn about the client-server model, the .NET Framework, the ASP.NET and C# programming languages, and the Visual Studio integrated development environment. Part II teaches you how to develop a single-page .NET web application and add server and data validation controls, laying the foundation for learning languages in the context of an ASP.NET web application. Part III is all about C# operations and shows you how to perform assignment operations, conversion operations, control operations, string operations, arithmetic operations, date and time operations, array operations, collection operations, and file system operations, as well as create custom C# classes in the context of a .NET web application. In Part IV, you dive into a multiple-page .NET web application and learn how to maintain state between pages and create master pages, themes, and navigation controls. Part V shows you how to connect a .NET web application to a SQL Server database. You will learn to read a database schema, program in the SQL language, utilize data binding, perform single- and multiple-row database table maintenance, and write code behind database operations. And finally, Part VI teaches you how to enhance the interactivity of a .NET web application. You will learn how to generate email messages, make use of basic Ajax controls and the Ajax Control Toolkit, and program in the JavaScript language. What You Will Learn Delve into the basics of the client-server model, the .NET Framework, the ASP.NET and C# programming languages, and the Visual Studio integrated development environment Create a page and add server and data validation controls Develop basic programming skills in the C# language Maintain state between pages and create master pages, themes, and navigation controls Read a database schema, program in the SQL language, utilize data binding, perform single- and multiple-row database table maintenance, and write code behind database operations Generate email messages, make use of basic Ajax controls and the Ajax Control Toolkit, and program in the JavaScript language Who This Book Is For Anyone who wants to learn how to build ASP.NET web applications. Basic computer skills and the use of a database management system are recommended. Instructor materials and examples are available.

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.

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.

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 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 I 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, Reservatio

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Presents an introduction to the open-source electronics prototyping platform.

Delivering rich, Web 2.0-style experiences has never been easier. This book gives you a complete hands-on introduction to Microsoft ASP.NET AJAX 1.0, the new framework that offers many of the same benefits for Ajax development that ASP.NET provides for server-side development. With Programming ASP.NET AJAX, you'll learn how to create professional, dynamic web pages with Ajax in no time. Loaded with code and examples that demonstrate key aspects of the framework, this book is ideal not only for ASP.NET developers who want to take their applications a step further with Ajax, but for any web developers interested in ASP.NET AJAX, no matter what technology they use currently. That includes JavaScript programmers who would like to avoid the headaches of writing cross-browser code. Programming ASP.NET AJAX offers you: A high-level overview of the ASP.NET AJAX framework Functional code that you can cut and paste for use in your own applications The essentials of JavaScript and Ajax to help you understand individual technologies used by the framework An organization that reflects the framework's packages, including Extensions, Control Toolkit, the Futures CTP, and the AJAX Library Sidebars throughout the book that identify and propose solutions to potential security breaches Ways to use the standards-based AJAX Library with other platforms, such as PHP A complete chapter on the UpdatePanel control for making individual parts of a web page independently updateable -- one of the framework's most important elements Released previously as Programming Atlas to cover the beta version of the Microsoft framework, this edition is fully up-to-date and expanded for the official 1.0 release of ASP.NET AJAX. Written by Christian Wenz -- Microsoft MVP for ASP/ASP.NET and AJAX Control Contributor -- Programming ASP.NET AJAX contains many hard-to-find details, along with a few unofficial ways to accomplish things.

Presenting four amazing Wrox books from an unparalleled author team cover the exciting new features of .NET 3.5. This essential boxed set contains the following key titles: Professional ASP.NET 3.5 covers all the important new features of the 3.5 version of ASP.NET, Professional C# 2008 provides the necessary background information on how the .NET architecture works, .NET Domain-Driven Design with C# takes you through the intense process of designing and implementing the domain model, and Professional LINQ shows you how to effectively use LINQ to query XML, SQLdatabases, ADO.NET DataSets, and other data sources.

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.

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

The professional's guide to C# 7, with expert guidance on the newest features Professional C# 7 and .NET Core 2.0 provides experienced programmers with the information they need to work effectively with the world's leading programming language. The latest C# update added many new features that help you get more done in less time, and this book is your ideal guide for getting up to speed quickly. C# 7 focuses on data consumption, code simplification, and performance, with new support for local functions, tuple types, record types, pattern matching, non-nullable reference types, immutable types, and better support for variables. Improvements to Visual Studio will bring significant changes to the way C# developers interact with the space, bringing .NET to non-Microsoft platforms and incorporating tools from other platforms like Docker, Gulp, and NPM. Guided by a leading .NET expert and steeped in real-world practicality, this guide is designed to get you up to date and back to work. With Microsoft speeding up its release cadence while offering more significant improvement with each update, it has never been more important to get a handle on new tools and features quickly. This book is designed to do just that, and more—everything you need to know about C# is right here, in the single-volume resource on every developer's shelf. Tour the many new and enhanced features packed into C# 7 and .NET Core 2.0 Learn how the latest Visual Studio update makes developers' jobs easier Streamline your workflow with a new focus on code simplification and performance enhancement Delve into improvements made for localization, networking, diagnostics, deployments, and more Whether you're entirely new to C# or just transitioning to C# 7, having a solid grasp of the latest features allows you to exploit the language's full functionality to create robust, high-quality apps. Professional C# 7 and .NET Core 2.0 is the one-stop guide to everything you need to know.

Learn how to apply functional F# design patterns to a huge range of programming challenges, and discover a smart route to building better applications About This Book This book provides a path if you are coming from imperative and object-oriented paradigms It will take you to an intermediate level of functional programming in very practical manner to write enterprise-quality idiomatic F# code Tackle complex computing problems with simple code by fully embracing the functional-first F# paradigm Packed full of practical coding examples to help you master F# programming and author optimal code Who This Book Is For This book is for .NET developers, web programmers, C# developers, and F# developers. So, if you have basic experience in F# programming and developing performance-critical applications, then this book is for you. What You Will Learn Acquire the practical

knowledge to use the main functional design patterns Realign some imperative and object-oriented principles under the functional approach Develop your confidence in building and combining first-order and higher-order functions Learn to use core language pattern matching effectively Make use of native F# algebraic data types in place of custom-built classes Recognize and measure the difference in resource consumption between sequences and materialized data collections Navigate and use F# Core libraries with ease by seeing patterns behind specific library functions Master writing generic polymorphic code In Detail Following design patterns is a well-known approach to writing better programs that captures and reuses high-level abstractions that are common in many applications. This book will encourage you to develop an idiomatic F# coding skillset by fully embracing the functional-first F# paradigm. It will also help you harness this powerful instrument to write succinct, bug-free, and cross-platform code. F# 4.0 Design Patterns will start off by helping you develop a functional way of thinking. We will show you how beneficial the functional-first paradigm is and how to use it to get the optimum results. The book will help you acquire the practical knowledge of the main functional design patterns, the relationship of which with the traditional Gang of Four set is not straightforward. We will take you through pattern matching, immutable data types, and sequences in F#. We will also uncover advanced functional patterns, look at polymorphic functions, typical data crunching techniques, adjusting code through augmentation, and generalization. Lastly, we will take a look at the advanced techniques to equip you with everything you need to write flawless code. Style and approach This book will teach you how to write F# code in an idiomatic functional-first manner, thereby improving the productivity of F# programmers. This book is ideal for an F# programmer who wants using F# in functional-first way.

Leverage ASP.Net Web API to build professional web services and create powerful applications. About This Book Get a comprehensive analysis of the latest specification of ASP.NET Core and all the changes to the underlying platform that you need to know to make the most of the web API See an advanced coverage of ASP.NET Core Web API to create robust models for your data, create controllers, and handle routing and security This book is packed with key theoretical and practical concepts that can be instantly applied to build professional applications using API with Angular 4, Ionic, and React Who This Book Is For This book is for .Net developers who wants to Master ASP.NET Core (Web API) and have played around with previous ASP.NET Web API a little, but don't have in-depth knowledge of it. You need to know Visual Studio and C#, and have some HTML, CSS, and JavaScript knowledge. What You Will Learn Acquire conceptual and hands-on knowledge of ASP.NET Core (MVC & Web API) Learn about HTTP methods, the structure of HTTP content, internet media types, and how servers respond to HTTP requests and their associated HTTP codes Explore middleware, filters, routing, and unit testing Optimize Web API implementations Develop a secure Web API interface Deploy Web API projects to various platforms Consume your web API in front end application based on Angular 4, Bootstrap, and Ionic Implement and explore the current trends in service architecture In Detail Microsoft has unified their main web development platforms. This unification will help develop web applications using various pieces of the ASP.NET platform that can be deployed on both Windows and LINUX. With ASP.NET Core (Web API), it will become easier than ever to build secure HTTP services that can be used from any client. Mastering ASP.NET Web API starts with the building blocks of the ASP.NET Core, then gradually moves on to implementing various HTTP routing strategies in the Web API. We then focus on the key components of building applications that employ the Web API, such as Kestrel, Middleware, Filters, Logging, Security, and Entity Framework. Readers will be introduced to take the TDD approach to write test cases along with the new Visual Studio 2017 live unit testing feature. They will also be introduced to integrate with the database using ORMs. Finally, we explore how the Web API can be consumed in a browser as well as by mobile applications by utilizing Angular 4, Ionic and ReactJS. By the end of this book, you will be able to apply best practices to develop complex Web API, consume them in frontend applications and deploy these applications to a modern hosting infrastructure. Style and approach Using a hands-on approach, we cover both the conceptual as well as the technical aspects of the ASP.NET Core (Web API) framework.

[Essential Algorithms](#)

[Build applications with C#, .NET Core, Entity Framework Core, ASP.NET Core, and ML.NET using Visual Studio Code, 4th Edition](#)

[Elements of Reusable Object-Oriented Software](#)

[Implement the Gang of Four patterns in your apps with Angular](#)

[.NET Design Patterns](#)

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[Agile coding with design patterns and SOLID principles](#)

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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.

Provides information on designing and implementing applications for Windows Phone 7.

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.

A friendly introduction to the most useful algorithms written in simple, intuitive English The revised and updated second edition of Essential Algorithms, offers an accessible introduction to computer algorithms. The book contains a description of important classical algorithms and explains when each is appropriate. The author shows how to analyze algorithms in order to understand their behavior and teaches techniques that the can be used to create new algorithms to meet future needs. The text includes useful algorithms such as: methods for manipulating common data structures, advanced data structures, network algorithms, and numerical algorithms. It also offers a variety of general problem-solving techniques. In addition to describing algorithms and approaches, the author offers details on how to analyze the performance of algorithms. The book is filled with exercises that can be used to explore ways to modify the algorithms in order to apply them to new situations. This updated edition of Essential Algorithms: Contains explanations of algorithms in simple terms, rather than complicated math Steps through powerful algorithms that can be used to solve difficult programming problems Helps prepare for programming job interviews that typically include algorithmic questions Offers methods can be applied to any programming language Includes exercises and solutions useful to both professionals and students Provides code examples updated and written in Python and C# Essential Algorithms has been updated and revised and offers professionals and students a hands-on guide to analyzing algorithms as well as the techniques and applications. The book also includes a collection of questions that may appear in a job interview. The book's website will include reference implementations in Python and C# (which can be easily applied to Java and C++).

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

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

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 IHttpHttpClientFactory 22 Building background tasks and services 23 Testing your application

What is this book about? Written by a high-profile team of ASP.NET experts, this fully updated Professional guide enables you to take full advantage of the power and possibilities of ASP.NET 1.1. You travel beyond the basics of ASP.NET Web pages, server controls, and data management to a complete understanding of Web services, debugging, performance, migration, and real-world applications. All code has been rechecked and verified to work correctly with ASP.NET 1.1, and enhancements like improved security and better performance are thoroughly examined and reviewed. This comprehensive, in-depth, practical guidebook enables you to master new levels of Web application development with the .NET Framework. What does this book cover? Here's what you will learn from this book: How to get started with ASP.NET and the .NET Framework Ways to create ASP.NET pages, work with server controls, and manage data Methods for developing, securing, and configuring Web applications Basics of base class libraries, components, and extensibility Security and performance improvements inherent in version 1.1 How Web services and ASP.NET function in the mobile arena Debugging, performance, migration, and interoperability Processes for applying this knowledge in real-world development contexts Who is this book for? This book is for programmers who have a solid understanding of ASP and want to develop sophisticated ASP.NET 1.1 applications using the .NET Framework. You should be familiar with VB or C-based syntax (C++, Java™, or C#).

[Conventions, Idioms, and Patterns for Reusable .NET Libraries](#)

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[Pro ASP.NET Core MVC](#)

[Modern API Design with ASP.NET Core 2](#)

[F# 4.0 Design Patterns](#)

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[Professional C# 7 and .NET Core 2.0](#)

[Reusable Approaches in C# and F# for Object-Oriented Software Design](#)

[Patterns, Principles, and Practices of Domain-Driven Design](#)

[Programming ASP.NET AJAX](#)

[Design Patterns](#)

In this book, you'll be introduced to the features and capabilities of ASP.NET 3.5, as well as the foundation that ASP.NET provides. Updated for the latest release of Visual Studio, this new edition adds five hundred pages of great new content compared to the original 2.0 version of the book. Including both printed and downloadable VB and C# code examples, this edition focuses even more on experienced programmers and advanced web development. New coverage includes new chapters on IIS 7 development, LINQ, ASP.NET, Silverlight, and many others.

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C#/.NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The books does not teach technologies like databases, mobile and web development, but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples. Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>. Title: Fundamentals of Computer Programming with C# (The Bulgarian C# Programming Book) ISBN: 9789544007737 ISBN-13: 978-954-400-773-7 (9789544007737) ISBN-10: 954-400-773-3 (9544007733) Author: Svetlin Nakov & Co. Pages: 1132 Language: English Published: Sofia, 2013 Publisher: Faber Publishing, Bulgaria Web site: <http://www.introprogramming.info> License: CC-Attribution-Share-Alike Tags: Free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality, high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733

This Wrox Blox demonstrates how to start using NHibernate in line business applications using ASP.NET and VB.NET. Using NHibernate will speed up your application development by removing the need to build your own Data Access Layer (DAL). In addition, you can focus solely on the business problem instead of the infrastructure concerns. Using a simple demo application as an example, this Wrox Blox shows how easy it is to get started with NHibernate and build your DAL in minutes instead of hours. Readers will also see how the POCO pattern enables you to keep your DAL as unobtrusive as possible as well as being interchangeable for future DAL implementations. You will also see how NHibernate has many enterprise patterns built into it, like the Unit of Work pattern and the Identity Map. Table of Contents What Is an Object Relational Mapper? 2 Why NHibernate? 2 Part 1: Getting Started with NHibernate 2 A Quick Demo 2 Part 2: The NHibernate Framework 13 Architecture and Core Concepts 13 Mapping Your Entities: Impedance Mismatch 16 Persisting Business Objects 18 Part 3: Using NHibernate 19 Introducing the Project and Laying out the Solution Framework 19 Designing the Domain Model 23 NHibernate Repository Project: Base Class 39 Managing Products 48 Managing Customers 58 NHibernate Repository Project: Refactoring and Session Management 69 Managing Orders 74 The Database — A Question of Storage 94 Presentation with the Model–View–Presenter Pattern 96 User Interface: ASP.NET 103 Part 4: Other NHibernate Bits and Pieces 113 Other Querying Methods 113 Mapping Inheritance 115 What Kind of SQL Is Being Produced? 118 Wrap Up 119 Scott Millett 120

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.

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

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

This 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.informia.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.

Ajax has revolutionized the way users interact with web pages today.Gone are frustrating page refreshes, lost scroll positions andintermittent interaction with a web site. Instead, we have a newgeneration of fast, rich, and more intuitive web applications. TheASP.NET AJAX framework puts the power of Ajax into the hands of webdevelopers. ASP.NET AJAX, formerly called Atlas, is a new free frameworkfrom Microsoft designed to easily add Ajax features to ASP.NETapplications. With this technology, ASP.NET developers can easily buildmore interactive and highly-personalized web applications that workacross all most popular browsers. ASP.NET AJAX in Action is a fast-paced, example-rich tutorial designedfor ASP.NET web developers and written by ASP.NET AJAX expertsAlessandro "Garbin" Gallo, David Barkol, and Rama Krishna Vavilala. Thisbook introduces you to Ajax applications and to the ASP.NET AJAXtechnology. Beginners will appreciate the clear explanations of keyideas and terminology. Intermediate and advanced ASP.NET developers willfind a no-nonsense learning source and well-organized reference. ASP.NET AJAX in Action offers a rich set of examples andmeticulousexplanations. The extensive code samples are accompanied by accurate andrigorous explanations of the concepts behind development with ASP.NETAJAX. In this book, you will discover how to use Microsoft Ajax Library Partial rendering with UpdatePanels Advanced client and server techniques Ajax Control Toolkit If you are a web developer looking to bring your web pages to life andto enhance the user experience, this book is for you. ASP.NET AJAX in Action will give you with the knowledge and tools youneed to more easily craft the next generation of Ajax applications. Withthe help of the Microsoft ASP.NET AJAX framework, Ajax development hasnever been easier and more instinctive for both client-script developersand ASP.NET developers alike. 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.

[Mastering ASP.NET Web API](#)

[Building a Web 2.0 Portal with ASP.NET 3.5](#)

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[In C# and VB](#)

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

A catalog of solutions to commonly occurring design problems, presenting 23 patterns that allow designers to create flexible and reusable designs for object-oriented software. Describes the circumstances in which each pattern is applicable, and discusses the consequences and trade-offs of using the pattern within a larger design. Patterns are compiled from real-world examples and implementations in object-oriented programming languages like C++ and Smalltalk. Includes a bibliography. Annotation copyright by Book News, Inc., Portland, OR

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

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 friendly applications on 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 the ASP.NET MVC 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, testability, 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. 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 architecture and 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 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.

* 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.

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 help you write 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 shows 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 are new to 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 building 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 book in order 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 software design principles 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 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: 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 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 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 a 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 Library: Building reusable 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

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