Thinking In Linq Harnessing The Power Of Functional Programming In Net Applications

Function literals, Monads, Lazy evaluation, Currying, and more About This Book Write concise and maintainable code with streams and high-order functions Understand the benefits of currying your Golang functions Learn the most effective design patterns for functional programming and learn when to apply each of them Build distributed MapReduce solutions using Go Who This Book Is For This book is for Golang developers comfortable with OOP and interested in learning how to apply the functional paradigm to create robust and testable apps. Prior programming experience with Go would be helpful, but not mandatory. What You Will Learn Learn how to compose reliable applications using high-order functions Explore techniques to eliminate side-effects using FP techniques such as currying Use first-class functions to implement pure functions Understand how to implement a lambda expression in Go Compose a working application using the decorator pattern Create faster programs using lazy evaluation Use Go concurrency constructs to compose a functionality pipeline Understand category theory and what it has to do with FP In Detail Functional programming is a popular programming paradigm that is used to simplify many tasks and will help you write flexible and succinct code. It allows you to decompose your programs into smaller, highly reusable components, without applying conceptual restraints on how the software should be modularized. This book bridges the language gap for Golang developers by showing you how to create and consume functional constructs in Golang. The book is divided into four modules. The first module explains the functional style of programming; pure functional programming (FP), manipulating collections, and using high-order functions. In the second module, you will learn design patterns that you can use to build FP-style applications. In the next module, you will learn FP techniques that you can use to improve your API signatures, to increase performance, and to build better Cloud-native applications. The last module delves into the underpinnings of FP with an introduction to category theory for software developers to give you a real understanding of what pure functional programming is all about, along with applicable code examples. By the end of the book, you will be adept at building applications the functional way. Style and approach This book takes a pragmatic approach and shows you techniques to write better functional constructs in Golang. We'll also show you how use these concepts to build robust and testable apps.

Tap into the wisdom of experts to learn what every programmer should know, no matter what language you use. With the 97 short and extremely useful tips for programmers in this book, you'll expand your skills by adopting new approaches to old problems, learning appropriate best practices, and honing your craft through sound advice. With contributions from some of the most experienced and respected practitioners in the industry--including Michael Feathers, Pete Goodliffe, Diomidis Spinellis, Cay Horstmann, Verity Stob, and many more--this book contains practical knowledge and principles that you can apply to all kinds of projects. A few of the 97 things you should know: "Code in the Language of the Domain" by Dan North "Write Tests for People" by Gerard Meszaros "Convenience Is Not an -ility" by Gregor Hohpe "Know Your IDE" by Heinz Kabutz "A Message to the Future" by Linda Rising "The Boy Scout Rule" by Robert C. Martin (Uncle Bob) "Beware the Share" by Udi Dahan

This essential classic provides a comprehensive foundation in the C# programming language and the framework it lives in. Now in its 10th edition, you will find the latest C# 9 and .NET 5 features served up with plenty of "behind the curtain" discussion designed to expand developers' critical thinking skills when it comes to their craft. Coverage of ASP.NET Core, Entity Framework Core, and more, sits alongside the latest updates to the new unified .NET platform, from performance improvements to Windows Desktop apps on .NET 5, updates in XAML tooling, and expanded coverage of data files and data handling. Going beyond the latest features in C# 9, all code samples are rewritten for this latest release. Dive in and discover why this book is a favorite of C# developers worldwide. Gain a solid foundation in object-oriented development techniques, attributes and reflection, generics and collections, and numerous advanced topics not found in other texts (such as CIL opcodes and emitting dynamic assemblies). With the help of Pro C# 9 with .NET 5 you will gain the confidence to put C# into practice, and explore the .NET universe and its vast potential on your own terms. What You Will Learn Explore C# 9 features and updates in records, immutable classes, init only setters, top-level statements, patterns, and more Hit the ground running with ASP.NET Core web applications and web services Embrace Entity Framework Core for building real-world, data-centric applications, with deeply expanded coverage new to this edition Develop applications with C# and modern frameworks for services, web, and smart client applications Understand the philosophy behind .NET Discover the new features in .NET 5, including single file applications and smaller container images, Windows ARM64 support, and more Dive into Windows Desktop Apps on .NET 5 using Windows Presentation Foundation Check out performance improvements included with updates to ASP.NET Core, Entity Framework Core, and internals like garbage collection, System.Text.Json, and container size optimization Who This Book Is For Developers who are interested in .NET programming and the C# language "Amazing! Provides easy-to-follow explanations and examples. I remember reading the first version of this book; this is a 'must-have' for your collection if you are learning .NET!" – Rick McGuire, Senior Application Development Manager, Microsoft "Phil is a journeyman programmer who brings years of experience and a passion for teaching to make this fully revised and modernized 'classic' a 'must-have'. Any developer who wants full-spectrum, up-to-date coverage of both the C# language and how to use it with .NET and ASP.NET Core should get this book." – Brian A. Randell, Partner, MCW Technologies and Microsoft MVP

Take your LINQ programming skills to the top tier Resolve data format impedance mismatch with guidance from a C# expert and Microsoft MVP. LINQ Programming details cutting-edge techniques to effectively assimilate XML, SQL, ADO.NET, and unstructured data sources. Build powerful LINQ queries, handle hierarchical and relational data, use lambdas and expression trees, and develop multi-threaded applications. Get proven strategies for handling conflicts and exceptions and creating custom extension methods. Additionally, you'll learn how to create your own LINQ provider through a working example, LINQ to Twitter. Filter, order, and group code using LINQ to Objects Query relational and unstructured data with LINQ to SQL and LINQ to XML Work with ADO.NET through LINQ to DataSet Deploy object-oriented programming techniques and LINQ to Entities Read, manipulate, and create C#-based XML documents Generate DBML and external mapping files with SqlMetal Create custom lambdas, expressions, providers, and extensions Support concurrent processing and multi-threading using PLINQ Build a custom LINQ provider for working with any data source

Cloud Computing: Theory and Practice provides students and IT professionals with an in-depth analysis of the cloud from the ground up. Beginning with a discussion of parallel computing and architectures and distributed systems, the book turns to contemporary cloud infrastructures, how they are being deployed at leading companies such as Amazon, Google and Apple, and how they can be applied in fields such as healthcare, banking and science. The volume also examines how to successfully deploy a cloud application across the enterprise using virtualization, resource management and the right amount of networking support, including content delivery networks and storage area networks. Developers will find a complete introduction to application development provided on a variety of platforms. Learn about recent trends in cloud computing in critical areas such as: resource management, security, energy consumption, ethics, and complex systems Get a detailed hands-on set of practical recipes that help simplify the deployment of a cloud based system for practical use of computing clouds along with an in-depth discussion of several projects Understand the evolution of cloud computing and why the cloud computing paradigm has a better chance to succeed than previous efforts in large-scale distributed computing

Masterminds of Programming features exclusive interviews with the creators of several historic and highly influential programming languages. In this unique collection, you'll learn about the processes that led to specific design decisions, including the goals they had in mind, the trade-offs they had to make, and how their experiences have left an impact on programming today. Masterminds of Programming includes individual interviews with: Adin D. Falkoff: APL Thomas E. Kurtz: BASIC Charles H. Moore: FORTH Robin Milner: ML Donald D. Chamberlin:

SQL Alfred Aho, Peter Weinberger, and Brian Kernighan: AWK Charles Geschke and John Warnock: PostScript Bjarne Stroustrup: C++ Bertrand Meyer: Eiffel Brad Cox and Tom Love: Objective-C Larry Wall: Perl Simon Peyton Jones, Paul Hudak, Philip Wadler, and John Hughes: Haskell Guido van Rossum: Python Luiz Henrique de Figueiredo and Roberto Ierusalimschy: Lua James Gosling: Java Grady Booch, Ivar Jacobson, and James Rumbaugh: UML Anders Hejlsberg: Delphi inventor and lead developer of C# If you're interested in the people whose vision and hard work helped shape the computer industry, you'll find Masterminds of Programming fascinating.

Foreword by Darryl Hogan, Architect Evangelist, Microsoft Corporation Microsoft's highly anticipated LINQ query technology makes it easy to retrieve any information programmatically from any data source, no matter where it comes from or how it's stored. Using LINQ, developers can query objects, relational databases, XML documents, and ADO.NET datasets--and do it all directly from C# 3.0, leveraging the powerful capabilities of LINQ. This is a definitive guide to getting real-world results with LINQ, using C# 3.0 and Visual Studio 2008. In LINQ Unleashed, Microsoft MVP Paul Kimmel covers every facet of LINQ programming, showing how LINQ can help you dramatically improve your productivity and build more reliable, maintainable applications. Kimmel begins by reviewing the state-of-the-art C# programming techniques LINQ uses, including anonymous types, partial methods, and Lambda expressions. Next, using realistic examples and easy-to-adapt sample code, he details the most powerful new LINQ techniques for accessing objects, databases, and XML. You'll gain a deep and practical understanding of how LINQ works "under the hood"--and learn how to do everything from selecting data through integrating XML with other data models. Build efficient LINQ queries to .NET objects, SQL databases, and XML content Utilize anonymous types to reduce design time, coding effort, and debugging time Automatically generate .NET state machines with the new yield return construct Master LINQ query syntax, operators, extension methods, sorting, grouping, aggregate and set operations, and more Make the most of select--and use it in the business layer of your n-tier applications Query relational data stored in Microsoft SQL Server Use nullable types to eliminate unnecessary database access plumbing code Use LINQ with ADO.NET 3.0 and Microsoft's powerful new Entity Framework Extract XML data without the hassles or complexity of XPath Automatically construct XML from CSV files and other non-XML data Query Active Directory by extending LINQ

LINQ represents a paradigm shift for developers used to an imperative/object oriented programming style, because LINQ draws on functional programming principles. Thinking in LINQ addresses the differences between these two by providing a set of succinct recipes arranged in several groups, including: Basic and extended LINQ operators Text processing Loop refactoring Monitoring code health Reactive Extensions (Rx.NET) Building domain-specific languages Using the familiar "recipes" approach, Thinking in LINQ shows you how to approach building LINQ-based solutions, how such solutions are different from what you already know, and why they're better. The recipes cover a wide range of real-world problems, from using LINQ to replace existing loops, to writing your own Swype-like keyboard entry routines, to finding duplicate files on your hard drive. The goal of these recipes is to get you "thinking in LINQ," so you can use the techniques in your own code to write more efficient and concise data-intensive applications.

Determine your object relational mapper (ORM) of choice for enterprise applications using .NET Framework, and especially .NET Framework Core 3.1 and higher. Real-world examples and considerations are presented in this book to help you create robust and efficient database solutions. Throughout the text, actual problems, questions, and common pitfalls are provided to help you recognize optimal solutions for maximum success in the different application scenarios you might encounter. Practical Entity Framework begins with a simple overview of the two most common approaches to working with databases—database first and code first—and then focuses on working in a code first manner. Taking the code first approach allows the entire database to be built and maintained in code so there is never a situation in which you cannot restore the database schema. Additionally, the code first approach creates an entirely transparent record of changes to the database that is easily tracked in source control. Emphasis throughout the book is on leaving you well positioned to architect and lead data development efforts for your organization. What You Will Learn Build robust and maintainable databases using a code first approach Create and execute stored procedures, triggers, and functions Analyze and optimize performance of database queries Ensure data integrity through keys, constraints, and relationships Who This Book Is For .NET developers who work with enterprise-level applications and need to interact with data structures and data within the back end data store, developers who want to take a code first approach to building database applications to prevent conflicts and optimize efficiency, and those who are moving into full-stack roles, or into senior and architectural roles, and will be responsible for database design and implementation

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 manned along with code examples.

This essential classic title provides a comprehensive foundation in the C# programming language and the frameworks it lives in. Now in its 9th edition, you will find the latest C# 8 and .NET Core features, along with new chapters on Microsoft's lightweight, cross-platform framework, .NET Core 3.0. Coverage of ASP.NET Core, Entity Framework (EF) Core, and more, sits alongside the latest updates to .NET Core, including Windows Presentation Foundation (WPF) and ASP.NET MVC. Dive in and discover why Pro C# has been a favorite of C# developers worldwide for over 15 years. Gain a solid foundation in object-oriented development

techniques, attributes and reflection, generics and collections, and numerous advanced topics not found in other texts (such as CIL opcodes and emitting dynamic assemblies). With the help of this book you will have the confidence to put C# into practice and explore the .NET universe on your own terms. What You Will Learn Discover the latest C# 8 features and updates to previous features Hit the ground running with ASP.NET Core web applications and web services, and Entity Framework Core Work with the latest version of Windows Presentation Foundation, now a part of .NET Core 3 Understand the philosophy behind .NET and the cross-platform alternative, .NET Core Obtain fundamentals for developing applications with C# and modern frameworks for services, web, and smart client applications Who This Book Is For Developers who are interested in Microsoft programming and the C# language

How can you overcome JavaScript language oddities and unsafe features? With this book, you'll learn how to create code that's beautiful, safe, and simple to understand and test by using JavaScript's functional programming support. Author Michael Fogus shows you how to apply functional-style concepts with Underscore.js, a JavaScript library that facilitates functional programming techniques. Sample code is available on GitHub at https://github.com/funjs/book-source. Fogus helps you think in a functional way to help you minimize complexity in the programs you build. If you're a JavaScript programmer hoping to learn functional programming techniques, or a functional programmer looking to learn JavaScript, this book is the ideal introduction. Use applicative programming techniques with first-class functions Understand how and why you might leverage variable scoping and closures Delve into higher-order functions—and learn how they take other functions as arguments for maximum advantage Explore ways to compose new functions from existing functions Get around JavaScript's limitations for using recursive functions Reduce, hide, or eliminate the footprint of state change in your programs Practice flow-based programming with chains and functional pipelines Discover how to code without using classes

An accessible and step-by-step approach to using VB.NET and XML enterprise application development XML is a tool for interacting with, describing, and transporting data between machines across networks and across the Internet-perfectly suited for Microsoft's .NET plan to fully integrate the Internet into distributed computing. By using real-world and fully-functional examples, this book quickly brings Visual Basic programmers and developers up to speed on XML for enterprise application development. The authors include an overview of XML and how it works with VB.NET, then explain how to use it to manipulate data in distributed environments. Companion Web site at www.vb-helper.com features the complete working code for all the examples built in the book. Microsoft Technologies .NET Platform: The next big overhaul to Microsoft's technologies that will bring enterprise distributed computing to the next level by fully integrating the Internet into the development platform. This will allow interaction between any machine, on any platform, and on any device. Visual Basic.NET: The update to this popular visual programming language will offer greater Web functionality, more sophisticated object-oriented language features, links to Microsoft's new common runtime, and a new interface. ASP.NET: A programming framework (formerly known as Active Server Pages) for building powerful Web-based enterprise applications; can be programmed using VB.NET or C#. C#: Microsoft's new truly object-oriented programming language that builds on the strengths of C++ and the ease of Visual Basic; promises to give Sun's Java a run for its money.

'Reliable JavaScript' demonstrates how to create test-driven development for large-scale JavaScript applications that will stand the test of time and stay accurate through long-term use and maintenance

Get started with Azure Synapse Analytics, Microsoft's modern data analytics platform. This book covers core components such as Synapse SQL, Synapse Spark, Synapse Pipelines, and many more, along with their architecture and implementation. The book begins with an introduction to core data and analytics concepts followed by an understanding of traditional/legacy data warehouse, modern data warehouse, and the most modern data lakehouse. You will go through the introduction and background of Azure Synapse Analytics along with its main features and key service capabilities. Core architecture is discussed, along with Synapse SQL. You will learn its main features and how to create a dedicated Synapse SQL pool and analyze your big data using Serverless Synapse SQL Pool. You also will learn Synapse Spark and Synapse Pipelines, with examples. And you will learn Synapse Workspace and Synapse Studio followed by Synapse Link and its features. You will go through use cases in Azure Synapse and understand the reference architecture for Synapse Analytics. After reading this book, you will be able to work with Azure Synapse Analytics and understand its architecture, main components, features, and capabilities. What You Will Learn Understand core data and analytics concepts and data lakehouse concepts Be familiar with overall Azure Synapse architecture and its main components Be familiar with Synapse SQL and Synapse Spark architecture components Work with integrated Apache Spark (aka Synapse Spark) and Synapse SQL engines Understand Synapse Workspace, Synapse Studio, and Synapse Pipeline Study reference architecture and use cases Who This Book Is For Azure data analysts, data engineers, data scientists, and solutions architects

HTML5 Programming for ASP.NET Developers teaches you to harness the power and flexibility of HTML5 in your ASP.NET Web Forms and ASP.NET MVC applications. Focusing on the programmable features of HTML5 that will be most useful to you as an ASP.NET developer, this book will take you straight to the heart of what you can get out of this new technology. HTML5 is an emerging web standard that has received a great deal of attention from browser companies and the developer community, encompassing HTML, JavaScript enhancements and CSS3 specifications. But HTML5 isn't just about markup. A major part of HTML5 is its programmable features and APIs, which make up the core of this book. HTML5 Programming for ASP.NET Developers will show you how to: Add interactivity and media to your sites using the Canvas and Audio and Video APIs. Make your web applications work offline, understand client side storage options using web storage, and work with local files using the File API. Use the Communication API and Web Sockets for easier communication between server and client. Other topics include multithreading with Web Workers, understanding the new input types, using Geolocation, and enhancing your web forms and views with CSS3. All major browsers already support HTML5 to varying degrees and are aggressively working to provide full-fledged standardized support. Start using HTML5 in your projects today, and build future-ready web applications that take advantage of the exciting features that HTML5 has to offer.

Completely updated for C# 6.0, the new edition of this bestseller offers more than 150 code recipes to common and not-so-common problems that C# programmers face every day. More than a third of the recipes have been rewritten to take advantage of new C# 6.0 features. If you prefer solutions to general C# language instruction and quick answers to theory, this is your book.C# 6.0 Cookbook offers new recipes for asynchronous methods, dynamic objects, enhanced error

handling, the Rosyln compiler, and more. Here are some of topics covered: Classes and generics Collections, enumerators, and iterators Data types LINQ and Lambda expressions Exception handling Reflection and dynamic programming Regular expressions Filesystem interactions Networking and the Web XML usage Threading, Synchronization, and Concurrency Each recipe in the book includes tested code that you can download from oreilly.com and reuse in your own applications, and each one includes a detailed discussion of how and why the underlying technology works. You don't have to be an experienced C# or .NET developer to use C# 6.0 Cookbook. You just have to be someone who wants to solve a problem now, without having to learn all the related theory first.

Against all odds, Katniss Everdeen has won the annual Hunger Games with fellow district tribute Peeta Mellark. But it was a victory won by defiance of the Capitol and their harsh rules. Katniss and Peeta should be happy. After all, they have just won for themselves and their families a life of safety and plenty. But there are rumors of rebellion among the subjects, and Katniss and Peeta, to their horror, are the faces of that rebellion. The Capitol is angry. The Capitol wants revenge.

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

Fully updated for ASP.NET MVC 3. Delve into the features, principles, and pillars of the ASP.NET MVC framework—deftly guided by web development luminary Dino Esposito. ASP.NET MVC forces developers to think in terms of distinct components—Model, View, Controller—that make it easier to manage application complexity, while allowing strict control over the markup. Plunge into the framework's internal mechanics and gain perspectives on how to use this programming model versus Web Forms, and begin building your own MVC-based applications quickly.

LLINQ, Language INtegrated Query, is a new extension to the Visual Basic and C# programming languages designed to simplify data queries and database interaction. It addreses O/R mapping issues by making query operations like SQL statements part of the programming language. It also offers built-in support for querying in-memory collections like arrays or lists, XML, DataSets, and relational databases. LINQ in Action is a fast-paced, comprehensive tutorial for professional developers. This book explores what can be done with LINQ, shows how it works in an application, and addresses the emerging best practices. It presents the general purpose query facilities offered by LINQ in the upcoming C# 3.0 and VB.NET 9.0 languages. A running example introduces basic LINQ concepts. You'll then learn to query unstructured data using LINQ to XML and relational data with LINQ to SQL. Finally, you'll see how to extend LINQ for custom applications. LINQ in Action will guide you along as you explore this new world of lambda expressions, query operators, and expression trees. As well, you'll explore the new features of C# 3.0, VB.NET 9.0. The book is very practical, anchoring each new idea with running code. Whether you want to use LINQ to query objects, XML documents, or relational databases, you will find all the information you need to get started But LINQ in Action does not stop at the basic code. This book also shows you how LINQ can be used for advanced processing of data, including coverage of LINQ's extensibility, which allows querying more data sources than those supported by default. All code samples are built on a concrete business case. The running example, LinqBooks, is a personal book cataloging system that shows you how to create LINQ applications with Visual Studio 2008. 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.

Machine Learning Projects for .NET Developers shows you how to build smarter .NET applications that learn from data, using simple algorithms and techniques that can be applied to a wide range of real-world problems. You'll code each project in the familiar setting of Visual Studio, while the machine learning logic uses F#, a language ideally suited to machine learning applications in .NET. If you're new to F#, this book will give you everything you need to get started. If you're already familiar with F#, this is your chance to put the language into action in an exciting new context. In a series of fascinating projects, you'll learn how to: Build an optical character recognition (OCR) system from scratch Code a spam filter that learns by example Use F#'s powerful type providers to interface with external resources (in this case, data analysis tools from the R programming language) Transform your data into informative features, and use them to make accurate predictions Find patterns in data when you don't know what you're looking for Predict numerical values using regression models Implement an intelligent game that learns how to play from experience Along the way, you'll learn fundamental ideas that can be applied in all kinds of real-world contexts and industries, from advertising to finance, medicine, and scientific research. While some machine learning algorithms use fairly advanced mathematics, this book focuses on simple but effective approaches. If you enjoy hacking code and data, this book is for you.

A comprehensive guide for beginners to learn the key concepts, real-world applications, and latest features of C# 9 and .NET 5 with hands-on exercises using VS Code Key Features Explore the newest additions to C# 9, the .NET 5 class library, Entity Framework Core and Blazor Strengthen your command of ASP.NET Core 5.0 and create professional websites and services Build cross-platform apps for Windows, macOS, Linux, iOS, and Android Book Description In C# 9 and .NET 5 – Modern Cross-Platform Development, Fifth 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 a new chapter on the Microsoft Blazor framework. The book's first part teaches the fundamentals of C#, including object-oriented programming and new C# 9 features such as top-level programs, target-typed new object instantiation, and immutable types using the record keyword. Part 2 covers the .NET APIs, for performing tasks like managing and querying data, monitoring and improving performance, and working with the file system, async streams, serialization, and encryption. Part 3 provides examples of cross-platform apps you can build and deploy, such as websites and services using ASP.NET Core or mobile apps using Xamarin.Forms. By the end of the book, you will have acquired the understanding and skills you need to use C# 9 and .NET 5 to create websites, services, and mobile apps. What you will learn Build your own types with object-oriented

programming Query and manipulate data using LINQ Build websites and services using ASP.NET Core 5 Create intelligent apps using machine learning Use Entity Framework Core and work with relational databases Discover Windows app development using the Universal Windows Platform and XAML Build rich web experiences using the Blazor framework Build mobile applications for iOS and Android using Xamarin.Forms Who this book is for This book is best for C# and .NET beginners, or programmers who have worked with C# in the past but feel left behind by the changes in the past few years. This book doesn't expect you to have any C# or .NET experience; however, you should have a general understanding of programming. Students and professionals with a science, technology, engineering, or mathematics (STEM) background can certainly benefit from this book.

This book aims to give experienced .NET developers a thorough grounding in Object Relational Mapping methodologies and show how LINQ can be used to achieve them. It provides detailed A-Z coverage of the key concepts and ideas in a clear, easy to follow, manner. The book is split into two parts. The first provides a detailed explanation of the key concepts and technologies, while the second brings them to life in a detailed fictional case study using an architecture that can be easily adapted to a wide range of reader's circumstances.

This open access book presents how Open Science is a powerful tool to boost Higher Education. The book introduces the reader into Open Access, Open Technology, Open Data, Open Research results, Open Licensing, Open Accreditation, Open Certification, Open Policy and, of course, Open Educational Resources. It brings all these key topics from major players in the field; experts that present the current state of the art and the forthcoming steps towards a useful and effective implementation. This book presents radical, transgenic solutions for recurrent and long-standing problems in Higher Education. Every chapter presents a clear view and a related solution to make Higher Education progress and implement tools and strategies to improve the user's performance and learning experience. This book is part of a trilogy with companion volumes on Radical Solutions & Learning Analytics and Radical Solutions & eLearning.

Now more than ever, Windows applications have to work well and look good. Windows Presentation Foundation (WPF), Microsoft's new user interface framework, gives you the ability to create stunning graphics, rich interactions, and highly-usable Windows applications. WPF is the API beneath Windows Vista interfaces, and it's also available for older versions of Windows. Up to this point, it has only been possible to build WPF applications manually, mainly by hand-coding in XAML-WPF's declarative XML-based markup language. The soon-to-be-released Visual Studio 2008 provides the full set of developer tools you need to take advantage of this exciting technology. The combination of WPF and Visual Studio 2008 represents the start of the next generation of Windows applications. Hand-coding XAML is fine if you're an early adopter, but to put WPF into production, you need to master the tools and application styles you'll use in your day job. WPF In Action focuses on WPF development using Visual Studio 2008 and other available tools.. The book starts with thorough coverage of the basics-layouts, styles, resources, and themes. It then takes you through several real-world scenarios, exploring common challenges and application-types. You'll build several sample applications, ranging from a simple calculator to a typical line-of-business application. Along the way, you'll add graphical elements, animation, and support for printing, accessibility, and other standard functionality. Written in a witty, engaging style, WPF In Action can be read cover-to-cover or used to reference specific problems and issues. The approach is practical and always focused on how you'll use WPF in real development scenarios. You'll learn how to handle the many new issues presented by the extreme flexibility of WPF. The authors also provide numerous tips and suggestions for how to work efficiently. 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. ASP.NET Core Identity provides authentication and user management for ASP.NET Core applications. Identity is a complex framework in its own right, with support for a wide range of features, including authenticating users with services provided by Google, Facebook, and Twitter. Best-selling author Adam Freeman explains how to get the most from ASP.NET Core Identity. He begins by describing common authentication and user management scenarios and explaining how they are implemented in ASP.NET Core applications. Then he dives deep into the Identity framework and explains how the most important and useful features work in detail, creating custom implementations of key components to reveal the inner workings of ASP.NET Core Identity. What You Will Learn: Gain a solid understanding of how Identity provides authentication and authorization for ASP.NET Core applications. Learn how to configure ASP.NET Core Identity for common application scenarios, including self-service registration, user management and authentication with services provided by popular social media platforms. Get started on creating robust and reliable user management tools. Understand how Identity works in detail Each topic is covered clearly and concisely and is packed with the essential details you need to learn to be truly effective. Who This Book Is For: This book is for developers with advanced knowledge of ASP.NET Core who are introducing Identity into their projects. Prior experience and knowledge of C#, ASP.NET Core is required, along with a basic understanding of authentication and authorization concepts. Summary Groovy in Action, Second Edition is a thoroughly revised, comprehensive guide to Groovy programming. It introduces Java developers to the dynamic features that Groovy provides, and shows how to apply Groovy to a range of tasks including building new apps, integration with existing code, and DSL development. Covers Groovy 2.4. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology In the last ten years, Groovy has become an integral part of a Java developer's toolbox. Its comfortable, common-sense design, seamless integration with Java, and rich ecosystem that includes the Grails web framework, the Gradle build system, and Spock testing platform have created a large Groovy community About the Book Groovy in Action, Second Edition is the undisputed definitive reference on the Groovy language. Written by core members of the Groovy language team, this book presents Groovy like no other can—from the inside out. With relevant examples, careful explanations of Groovy's key concepts and features, and insightful coverage of how to use Groovy in-production tasks, including building new applications, integration with existing code, and DSL development, this is the only book you'll need. Updated for Groovy 2.4. Some experience with Java or another programming language is helpful. No Groovy experience is assumed. What's Inside Comprehensive coverage of Groovy 2.4 including language features, libraries, and AST transformations Dynamic, static, and extensible typing Concurrency: actors, data parallelism, and dataflow Applying Groovy: Java integration, XML, SQL, testing, and domain-specific language support Hundreds of reusable examples About the Authors Authors Dierk König, Paul King, Guillaume Laforge, Hamlet D'Arcy, Cédric Champeau, Erik Pragt, and Jon Skeet are intimately involved in the creation and ongoing development of the Groovy language and its ecosystem. 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Want to learn how to build ASP.NET Core 1.1 MVC Web Applications? Prerequisites: * C# (Intermediate level) * HTML5/CSS3 (Basic knowledge) This book is primarily aimed at developers who want to learn how to build ASP.NET Core 1.1 MVC Applications. You should be an intermediate level C# developer with some experience in HTML5 and CSS3. The book presupposes that you have a solid C# foundation since the language won't be explained in any detail. You will learn ASP.NET Core 1.1 by building two MVC applications. The first application will be built using an empty template. The goal is to get you familiar with ASP.NET Core 1.1 by adding middleware and services one piece at a time, building a basic application. Then you will build a second MVC application using a template that already contains support for MVC, Entity Framework Core, and user authentication. This application is a video course website, where users can register to gain access to video courses. If you are already familiar with MVC 5, the content in this book can get you started with ASP.NET Core 1.1 in a fast, no-fluff way. It's important to mention that this book is practical and tactical, where you will learn as you progress through the modules and build real web applications in the process. To spare you countless pages of fluff (filler material), only valuable information, pertinent to the task at hand, is discussed. The benefit is a shorter and more condensed book, which will save you time and give you a more enjoyable experience. The goal is to learn ASP.NET Core 1.1 by building two web applications, one from scratch and one from an existing template. This experience is something you can put in your CV when applying for a job or a consultant position, or when negotiating a higher salary. Technologies, frameworks and languages you will use: * ASP.NET Core 1.1 MVC (The framework that you will use) * Services (To provide you own functionality as a reusable service) * Middleware (To provide you own functionality to HTTP Request pipeline) * Entity Framework (To crate and communicate with a database) * View Component (To render data in the _Layout view with model data) * Razor syntax (To include server-side code in views) * Bootstrap (Used for styling and to create a responsive design) * LINQ (To query the database) * Dependency Injection (To inject objects into constructors) * Tag Helper (to clean up the HTML and enable re-use) * HTML Helper methods (to clean up your HTML and enable re-use) * Bower/NuGet (To install necessary front-end/back-end libraries) What you will implement: * Implement a web application from an empty template. * Implement a web application from an existing template. * Create a "real world" code-first database using Entity Framework Core. * Add and modify models, views and controllers to perform CRUD operations against the database. * Use client-side and server-side validation. * Secure the controllers, actions and view content with authorization and roles. * Styling HTML with CSS and Bootstrap. * Create a responsive website. * Register users with the site. * Manage users and their video courses. I hope you love the book! Sincerely, Jonas Fagerberg Now click the Buy button and start reading the book.

Why learn F#? With this guide, you'll learn how this multi-paradigm language not only offers you an enormous productivity boost through functional programming, but also lets you develop applications using your existing object-oriented and imperative programming skills. You'll quickly discover the many advantages of the language, including access to all the great tools and libraries of the .NET platform. Reap the benefits of functional programming for your next project, whether you're writing concurrent code, or building data- or math-intensive applications. With this comprehensive book, former F# team member Chris Smith gives you a head start on the fundamentals and walks you through advanced concepts of the F# language. Learn F#'s unique characteristics for building applications Gain a solid understanding of F#'s core syntax, including object-oriented and imperative styles Make your object-oriented code better by applying functional programming patterns Use advanced functional techniques, such as tail-recursion and computation expressions Take advantage of multi-core processors with asynchronous workflows and parallel programming Use new type providers for interacting with web services and information-rich environments Learn how well F# works as a scripting language

Rely on this robust and thorough guide to build and maintain successful test automation. As the software industry shifts from traditional waterfall paradigms into more agile ones, test automation becomes a highly important tool that allows your development teams to deliver software at an ever-increasing pace without compromising quality. Even though it may seem trivial to automate the repetitive tester's work, using test automation efficiently and properly is not trivial. Many test automation endeavors end up in the "graveyard" of software projects. There are many things that affect the value of test automation, and also its costs. This book aims to cover all of these aspects in great detail so you can make decisions to create the best test automation solution that will not only help your test automation project to succeed, but also allow the entire software project to thrive. One of the most important details that affects the success of the test automation is how easy it is to maintain the automated tests. Complete Guide to Test Automation provides a detailed hands-on guide for writing highly maintainable test code. What You'll Learn Know the real value to be expected from test automation Discover the key traits that will make your test automation project succeed Be aware of the different considerations to take into account when planning automated tests vs. manual tests Determine who should implement the tests and the implications of this decision Architect the test project and fit it to the architecture of the tested application Design and implement highly reliable automated tests Begin gaining value from test automation earlier Integrate test automation into the business processes of the development team Leverage test automation to improve your organization's performance and quality, even without formal authority Understand how different types of automated tests will fit into your testing strategy, including unit testing, load and performance testing, visual testing, and more Who This Book Is For Those involved with software development such as test automation leads, QA managers, test automation developers, and development managers. Some parts of the book assume hands-on experience in writing code in an object-oriented language (mainly C# or Java), although most of the content is also relevant for nonprogrammers.

Use the code-driven approach of Entity Framework Core 5 to build a functional web application that accesses a database on the backend server. This book covers the common use cases of Entity Framework that a developer needs to master in order to begin building applications that run against a database. Throughout the book you will be shown how to use Entity Framework Core 5 by implementing a simple ASP.NET Core Razor Pages line-of-business application. This example application will be similar to those you might write yourself and deploy to your users on a web or intranet site via a browser. This book takes a code-first approach in which your database will be created and seeded programmatically. You won't need to create the database through your database engine's interface. Instead, you will be shown how to define your data model in Entity Framework, and then let Entity Framework

do the work of creating your database and schema for you. From there you will learn how to seed your database with example data, then to implement the common, so-called CRUD operations consisting of creating, retrieving, updating, and deleting rows of data. By the end of the book you will have built a well-designed application that you can use as the basis for future applications that you create in your job. What You Will Learn Download and install Entity Framework Core 5 Perform create, read, update, and delete (CRUD) operations Create and seed a database with example data using Entity Framework Core 5 Incrementally add new database functionality through Entity Framework Core 5 migrations Recognize when to take advantage of new features introduced in Entity Framework Core 5 Deliver line-of-business applications using ASP.NET Core that run in a browser Who This Books Is For Developers who are familiar with C# and the .NET Framework who want to learn database access using Entity Framework Core 5. For developers creating web-based, line-of-business applications who want to create those applications more quickly and efficiently when databases are involved.

In this 1989 book, Rorty examines human solidarity and liberalism through literature, philosophy, social theory and literary criticism.

This fifth edition of the popular C# guide helps you learn the building blocks of C# language, right from variables to classes and exception handling. After getting to grips with the basics of C# programming, it takes you through the world of Unity game development and how you can apply C# knowledge using game development examples.

Its scale, flexibility, cost effectiveness, and fast turnaround are just a few reasons why crowdsourced testing has received so much attention lately. While there are a few online resources that explain what crowdsourced testing is all about, there's been a need for a book that covers best practices, case studies, and the future of this technique.F

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 draws on new C# 3.0 language 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 why they're used, with tables 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 program available for download 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.

If you've asked yourself "Why can't I develop database and XML queries in a language I already know?", then Language INtegrated Query, or LINQ, is for you. LINQ For Dummies introduces you to LINQ and the .NET Framework technologies, so you can use LINQ to query any object, any data set, any kind of XML, and SQL Server—no questions asked. This plain-English guide gives you a thorough overview of LINQ, from understanding the tasks it performs to making LINQ work with both Visual Basic and Visual Studio 2005. It explains the four LINQ providers in the .NET Framework, the easiest ways to go about accessing data, and how to write more efficient applications with less code using LINQ. There's also clear guidance on combining third-party providers with LINQ to create even more powerful apps. With this single, comprehensive guide, you'll discover how to: Use one query language with all Microsoft languages Examine .NET language extensions and work with extension methods, partial methods, lambda expressions, and query expressions LINQ to DataSet operators, SQL server operations, XML API, or Active Directory Deal with databases — download and install the Northwind database, generate Northwind entity classes, and create the Northwind XML mapping file Create the partial class example, the partial method example, and the database modification example Use objects with LINQ Query databases in Visual Basic and C# As an added bonus, you can visit the companion Web site for LINQ examples in C# and Visual Basic. With LINQ For Dummies, you'll link up with LINQ in no time and see how you can query almost anything! Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

Programming is now parallel programming. Much as structured programming revolutionized traditional serial programming decades ago, a new kind of structured programming, based on patterns, is relevant to parallel programming today. Parallel computing experts and industry insiders Michael McCool, Arch Robison, and James Reinders describe how to design and implement maintainable and efficient parallel algorithms using a pattern-based approach. They present both theory and practice, and give detailed concrete examples using multiple programming models. Examples are primarily given using two of the most popular and cutting edge programming models for parallel programming: Threading Building Blocks, and Cilk Plus. These architecture-independent models enable easy integration into existing applications, preserve investments in existing code, and speed the development of parallel applications. Examples from realistic contexts illustrate patterns and themes in parallel algorithm design that are widely applicable regardless of implementation technology. The patterns-based approach offers structure and insight that developers can apply to a variety of parallel programming models Develops a composable, structured, scalable, and machine-independent approach to parallel computing Includes detailed examples in both Cilk Plus and the latest Threading Building Blocks, which support a wide variety of computers

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