

Net Application Architecture Guide 2nd Edition

Looks at the principles and clean code, includes case studies showcasing the practices of writing clean code, and contains a list of heuristics and "smells" accumulated from the process of writing clean code.

Practical Software Architecture Solutions from the Legendary Robert C. Martin ("Uncle Bob") By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin applies them. Martin's Clean Architecture doesn't merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges that software architects need to achieve--and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what's critically important and what's merely a "detail" in your design client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager--and for anyone who produces software. Includes a CD-ROM with source code examples and demos of popular C# upgrade and programming tools. Your product for convenient access to downloads, updates, and/or corrections as they become available.

Describes ways to incorporate domain modeling into software development.

A software architect's digest of core practices, pragmatically applied Designing effective architecture is your best strategy for managing project complexity--and improving your results. But the principles and practices of software architecting--what the authors call the "science of hard decisions"--have been evolving for cloud, mobile, and other shifts. Now fully revised, this book offers new perspectives that enable you to design for success--and deliver more successful solutions. In this fully updated Second Edition, you will: Learn how only a deep understanding of domain can lead to appropriate architecture Examine domain-driven design in both theory and implementation Shift your approach to code first, model later--including multilayer architecture and domain-driven design readability, testability, and extensibility lead to code quality Take a user experience (UX) first approach, rather than designing for data Review patterns for organizing business logic Use event sourcing and CQRS together to model complex business domains more effectively Delve inside the persistence layer, including patterns and implementation.

Tackling Complexity in the Heart of Software

Elements of User Experience,The

Designing Embedded Hardware

With examples in Java

NET Architecture and Programming Using Visual C++

Authentication, Authorization, and Secure Communication : Patterns & Practices

Enterprise Application Architecture with .NET Core

"A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you 44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning's POJOs in Action, and creator of the original CloudFoundry.com. Table of Contents Escaping monolithic hell Decomposition strategies Interprocess communication in a microservice architecture Managing transactions with sagas Designing business logic in a microservice architecture Developing business logic with event sourcing Implementing queries in a microservice architecture External API patterns Testing microservices: part 1 Testing microservices: part 2 Developing production-ready services Deploying microservices Refactoring to microservices

Beschrijving van vijftientwintig open source applicaties.

The purpose of this book is to provide tools to design and implement network-orientated applications in .NET. It is also a guide for software designers to choose the best and most efficient way to implement mission critical solutions. The book addresses real-world issues facing professional developers, such as using third-party components as opposed in-house development. It differentiates itself from existing .NET publications because it is aimed at experienced professionals and concentrates on practical, ready-to-use information. The book is written in two languages C# and VB.NET, and covers never-before published information on Telephony in .NET and packet-level networking. This is the second book in the Digital Press Software Development Series. Coverage of lower level protocols allows implementation of performance-centric applications Demonstrates the feasibility of developing telephony solutions in-house rather than outsourcing Written in VB.NET and C# to assist readers working in either language Coverage of Email, FTP and the WWW allows implementation of applications in all three areas

Microsoft's C# ("C sharp") is a modern, object-oriented programming language built from the ground up to exploit the power of XML-based Web services on Microsoft's new .NET platform. With its Visual C++ development system heritage, C# will enable millions of C and C++ developers to use existing skills to rapidly build sophisticated XML-based .NET applications. Why Will Web Developers Switch to C#? ...Because it's the ideal solution for C and C++ programmers who need to combine rapid development with the power to access all the functionality of the Microsoft.NET platform. They want an environment that is completely in sync with emerging Web standards and one that provides easy integration with existing applications. C#.net Web Developer's Guide will enhance developer productivity and help them eliminate programming errors that can lead to increased development costs. This book teaches Web developers to quickly and easily build solutions for the Microsoft .NET platform. Web developers will learn to use C# components to build Web services and applications that are available across the Internet, from any application running on any platform. * Timely coverage of newly released product - programmers and developers are anxious to learn about the new technology * Comes with Syngress' revolutionary wallet-sized CD containing a printable HTML version of the book and all of the source code examples and demos of popular C# upgrade and programming tools

A Developer's Guide to DevOps Architecture the Right Way

Elegance, Evolution, and a Few Fearless Hacks

Domain-driven Design

Learn solution architecture principles and design techniques to build modern .NET solutions

The Definitive Guide

Understanding single-page web applications

Architecting Software Solutions Using Microservices, DevOps, and Design Patterns for Azure Cloud

Job titles like "Technical Architect" and "Chief Architect" nowadays abound in software industry, yet many people suspect that "architecture" is one of the most overused and least understood terms in professional software development. Gorton's book tries to resolve this dilemma. It concisely describes the essential elements of knowledge and key skills required to be a software architect. The explanations encompass the essentials of architecture thinking, practices, and supporting technologies. They range from a general understanding of structure and quality attributes through technical issues like middleware components and service-oriented architectures to recent technologies like model-driven architecture, software product lines, aspect-oriented design, and the Semantic Web, which will presumably influence future software systems. This second edition contains new material covering enterprise architecture, agile development, enterprise service bus technologies, RESTful Web services, and a case study on how to use the MeDICi integration framework. All approaches are illustrated by an ongoing real-world example. So if you work as an architect or senior designer (or want to someday), or if you are a student in software engineering, here is a valuable and yet approachable knowledge source for you.

Design scalable and high-performance enterprise applications using the latest features of C# 8 and .NET Core 3 Key Features Become a software architect capable of creating modular apps for specific business needs Design high-performance software systems using the latest features of C# 8 and .NET Core 3 Solve scalability problems in web apps using enterprise architectural patterns Book Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. With this software architecture book, you'll follow a hands-on approach to learning various architectural methods that will help you develop and deliver high-quality products. You'll begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you'll explore how to carefully choose a cloud solution for your infrastructure, along with covering dos and don'ts that will help you manage your app in a cloud-based environment. Later chapters will cover techniques and processes such as DevOps, microservices, and continuous integration, along with providing insights into implementing them using Microsoft technologies such as ASP.NET Core, the Entity Framework, Cosmos DB, and Azure DevOps. You will also learn about testing frameworks and automation tools that will help you through the development process. Finally, you'll discover design patterns and various software approaches that will allow you to solve common problems faced during development. By the end of this book, you'll be able to develop and deliver highly scalable enterprise-ready apps that meet customers' business needs. What you will learn Overcome real-world architectural challenges and solve design consideration issues Apply architectural approaches like Layered Architecture, service-oriented architecture (SOA), and microservices Learn to use tools like containers, Docker, and Kubernetes to manage microservices Get up to speed with Azure Cosmos DB for delivering multi-continental solutions Learn how to program and maintain Azure Functions using C# Understand when to use test-driven development (TDD) as an approach for software development Write automated functional test cases for your projects Who this book is for This book is for engineers and senior developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Experience with C# and .NET is required to understand this book.

This book describes the essential components of the SCION secure Internet architecture, the first architecture designed foremost for strong security and high availability. Among its core features, SCION also provides route control, explicit trust information, multipath communication, scalable quality-of-service guarantees, and efficient forwarding. The book includes functional specifications of the network elements, communication protocols among these elements, data structures, and configuration files. In particular, the book offers a specification of a working prototype. The authors provide a comprehensive description of the main design features for achieving a secure Internet architecture. They facilitate the reader throughout, structuring the book so that the technical detail gradually increases, and supporting the text with a glossary, an index, a list of abbreviations, answers to frequently asked questions, and special highlighting for examples and for sections that explain important research, engineering, and deployment features. The book is suitable for researchers, practitioners, and graduate students who are interested in network security.

This is a practical hands-on book with clear instructions and lot of code examples. It takes a simple approach, guiding you through different architectural topics using realistic sample projects. A single project is implemented using different architectural styles to make the reader understand the details of each style. There are also many small independent code samples to explain design patterns, WCF, and localization. This book is for people familiar with the ASP.NET framework using either C# or VB.NET. You don't need to be an ASP.NET guru – the book is ideal for novice and intermediate developers. If reading about application architecture usually confuses you or sends you to sleep, then this book will be perfect for you! In short, any ASP.NET programmer who is confused or disoriented reading different books or materials on architectures wondering how and what to implement in their application, will definitely benefit from this book!

User-Centered Design for the Web and Beyond

SPA Design and Architecture

Occupational Outlook Handbook

The Architecture of Open Source Applications

Pattern Enterpr Applica Arch

Asp.net 3.5 Application Architecture and Design

A hands-on guide to creating clean web applications with code examples in Java

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 often occur because 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 CORBA to Java 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 is a short tutorial on developing 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 to further explain the concepts. 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 between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces Gain insight into how hexagonal architecture can help to keep the cost of development low over the complete lifetime of an application Key FeaturesExplore ways to make your software flexible, extensible, and adaptableLearn new concepts that you can easily blend with your own software development styleDevelop the mindset of building maintainable solutions instead of taking shortcutsBook Description We would all like to build software architecture that yields adaptable and flexible software with low development costs. But, unreasonable deadlines and shortcuts make it very hard to create such an architecture. Get Your Hands Dirty on Clean Architecture starts with a discussion about the conventional layered architecture style and its disadvantages. It also talks about the advantages of the domain-centric architecture styles of Robert C. Martin's Clean Architecture and Alistair Cockburn's Hexagonal Architecture. Then, the book dives into hands-on chapters that show you how to manifest a hexagonal architecture in actual code. You'll learn in detail about different mapping strategies between the layers of a hexagonal architecture and see how to assemble the architecture elements into an application. The later chapters demonstrate how to enforce architecture boundaries. You'll also learn what shortcuts produce what types of technical debt and how, sometimes, it is a good idea to willingly take on those debts. After reading this book, you'll have all the knowledge you need to create applications using the hexagonal architecture style of web development. What you will learnIdentify potential shortcomings of using a layered architectureApply methods to enforce architecture boundariesFind out how potential shortcuts can affect the software architectureProduce arguments for when to use which style of architectureStructure your code according to the architectureApply various types of tests that will cover each element of the architectureWho this book is for This book is for you if you care about the architecture of the software you are building. To get the most out of this book, you must have some experience with web development. The code examples in this book are in Java. If you are not a Java programmer but can read object-oriented code in other languages, you will be fine. In the few places where Java or framework specifics are needed, they are thoroughly explained.

Intelligent readers who want to build their own embedded computer systems-- installed in everything from cell phones to cars to handheld organizers to refrigerators-- will find this book to be the most in-depth, practical, and up-to-date guide on the market. Designing Embedded Hardware carefully steers between the practical and philosophical aspects, so developers can both create their own devices and gadgets and customize and extend off-the-shelf systems. There are hundreds of books to choose from if you need to learn programming, but only a few are available if you want to learn to create hardware. Designing Embedded Hardware provides software and hardware engineers with no prior experience in embedded systems with the necessary conceptual and design building blocks to understand the architectures of embedded systems. Written to provide the depth of coverage and real-world examples developers need, Designing Embedded Hardware also provides a road-map to the pitfalls and traps to avoid in designing embedded systems. Designing Embedded Hardware covers such essential topics as: The principles of developing computer hardware Core hardware designs Assembly language concepts Parallel I/O Analog-digital conversion Timers (internal and external) UART Serial Peripheral Interface Inter-Integrated Circuit Bus Controller Area Network (CAN) Data Converter Interface (DCI) Low-power operation This invaluable and eminently useful book gives you the practical tools and skills to develop, build, and program your own application-specific computers.

Developing Microservices Architecture on Azure with Open Source Technologies is a complete, step-by-step guide to building flexible microservices architectures by leveraging services provided by the Microsoft Azure cloud platform, and key open-source technologies such as Java, Node.js, .NET Core and Angular. Expert Microsoft consultants Ovais Mehboob and Arvind Chandaka guide students step-by-step through a realistic case study project that illuminates key technical implementation tasks for establishing end to end infrastructure, developing cloud-native applications, automating deployment, and realizing value.

Designing change-tolerant software

802.11 Wireless Networks: The Definitive Guide

SCION: A Secure Internet Architecture

Web Application Architecture

A Guide for Commercial Architecture

Fowler

A Craftsman's Guide to Software Structure and Design

IBM® API Connect is an API management solution from IBM that offers capabilities to create, run, manage, and secure APIs and microservices. By using these capabilities, the full lifecycle of APIs for on-premises and cloud environments can be managed. This IBM Redpaper™ publication describes practical scenarios that show the API Connect capabilities for managing the full API life cycle, creating, running, securing, and managing the APIs. This Redpaper publication is targeted to users of an API Connect based API strategy, developers, IT architects, and technical evangelists. If you are not familiar with APIs or API Connect, we suggest that you read the Redpaper publication Getting Started with IBM API Connect: Concepts, Architecture and Strategy Guide, REDP-5349, before reading this publication.

Portland strikes a unique balance between the rich architectural traditions of the past and the cutting-edge creative developments of modern architecture. Within a small downtown area can be found 19th-century cast-iron-front buildings, skyscrapers, old brick warehouses, a landmark 1890 train station, historic

bridges, and a distinguished assortment of museum, government, and retail buildings. Its civic planning, historic preservation, and overall attractiveness make Portland a place that natives revel in and visitors admire. Written for both layperson and professional, *An Architectural Guidebook to Portland* is filled with history and photos that demonstrate why this city is one of the most admired in the nation. The Guidebook's first edition was praised for its readability and usefulness as a reference book. It has now been revised and updated to reflect Portland's explosive growth in the 21st century. New features include an added focus on the development of "green buildings" and sustainable design in Portland, a chapter on downtown bridges, expanded coverage of the city's vibrant neighborhoods, and a glossary of architectural terms. With over 250 entries that tell the stories behind Portland's celebrated cityscape, this comprehensive guide is an indispensable resource for visitors and Portlanders alike.

Get the definitive guide on designing applications on the Microsoft application platform—straight from the Microsoft patterns & practices team. Learn how to choose the most appropriate architecture and the best implementation technologies that the Microsoft application platform offers applications developers. Get critical design recommendations and guidelines organized by application type—from Web, mobile, and rich Internet applications to Office Business Applications. You'll also get links to additional technical resources that can help with your application development.

From the moment it was published almost ten years ago, *Elements of User Experience* became a vital reference for web and interaction designers the world over, and has come to define the core principles of the practice. Now, in this updated, expanded, and full-color new edition, *Jesse James Garrett* has refined his thinking about the Web, going beyond the desktop to include information that also applies to the sudden proliferation of mobile devices and applications. *Successful interaction design requires more than just creating clean code and sharp graphics. You must also fulfill your strategic objectives while meeting the needs of your users. Even the best content and the most sophisticated technology won't help you balance those goals without a cohesive, consistent user experience to support it. With so many issues involved—usability, brand identity, information architecture, interaction design—creating the user experience can be overwhelmingly complex. This new edition of The Elements of User Experience cuts through that complexity with clear explanations and vivid illustrations that focus on ideas rather than tools or techniques. Garrett gives readers the big picture of user experience development, from strategy and requirements to information architecture and visual design.*

Solution Architecture with .NET

Hands-On Software Architecture with C# 8 and .NET Core 3

Developing Microservices Architecture on Azure with Open Source Technologies

Building Secure Microsoft ASP.NET Applications

Principles, Protocols and Practices

Clean Code

Learning ASP.NET Core 3.0 –Second Edition

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Through four complete sprints, this book takes you through every step needed to build brand new cross-platform web apps with ASP.NET Core, and make them available on the Internet. You won't just master Microsoft's revolutionary open source ASP.NET Core technology: you'll learn how to integrate the immense power of MVC, Docker, Azure Web Apps, Visual Studio and Visual Studio Code, C#, JavaScript, TypeScript, and Entity Framework. Working through the authors' carefully designed sprints, you'll start with a blank canvas, move through software architecture and design, adjusting to user feedback, recovering from mistakes, builds, testing, deployment, maintenance, refactoring, and more. Along the way, you'll learn techniques for delivering state-of-the-art software to users more rapidly and repeatedly than ever before.

Use this book as your one-stop shop for architecting a world-class DevOps environment with Microsoft technologies. .NET DevOps for Azure is a synthesis of practices, tools, and process that, together, can equip a software organization to move fast and deliver the highest quality software. The book begins by discussing the most common challenges faced by developers in DevOps today and offers options and proven solutions on how to implement DevOps for your team. Daily, millions of developers use .NET to build and operate mission-critical software systems for organizations around the world. While the marketplace has scores of information about the technology, it is completely up to you to put together all the blocks in the right way for your environment. This book provides you with a model to build on. The relevant principles are covered first along with how to implement that part of the environment. And while variances in tools, language, or requirements will change the needed implementation, the DevOps model is the architecture for the working environment for your team. You can modify parts of the model to customize it to your enterprise, but the architecture will enable all of your teams and applications to accelerate in performance. What You Will Learn Get your .NET applications into a DevOps environment in Azure Analyze and address the part of your DevOps process that causes delays or bottlenecks Track code using Azure Repos and conduct acceptance tests Apply the rules for segmenting applications into Git repositories Understand the different types of builds and when to use each Know how to think about code validation in your DevOps environment Provision and configure environments; deploy release candidates across the environments in Azure Monitor and support software that has been deployed to a production environment Who This Book Is For .NET Developers who are using or want to use DevOps in Azure but don't know where to begin

Design scalable and high-performance enterprise applications using the latest features of C# 9 and .NET 5 Key Features Gain fundamental and comprehensive software architecture knowledge and the skillset to create fully modular apps Design high-performance software systems using the latest features of .NET 5 and C# 9 Solve scalability problems in web apps using enterprise architecture patterns Book Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. This fully revised and expanded second edition, featuring the latest features of .NET 5 and C# 9, enables you to acquire the key skills, knowledge, and best practices required to become an effective software architect. This second edition features additional explanation of the principles of Software architecture, including new chapters on Azure Service Fabric, Kubernetes, and Blazor. It also includes more discussion on security, microservices, and DevOps, including GitHub deployments for the software development cycle. You will begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you will explore how to carefully choose a cloud solution for your infrastructure, along with the factors that will help you manage your app in a cloud-based environment. Finally, you will discover software design patterns and various software approaches that will allow you to solve common problems faced during development. By the end of this book, you will be able to build and deliver highly scalable enterprise-ready apps that meet your organization's business requirements. What you will learn Use different techniques to overcome real-world architectural challenges and solve design consideration issues Apply architectural approaches such as layered architecture, service-oriented architecture (SOA), and microservices Leverage tools such as containers, Docker, Kubernetes, and Blazor to manage microservices effectively Get up to speed with Azure tools and features for delivering global solutions Program and maintain Azure Functions using C# 9 and its latest features Understand when it is best to use test-driven development (TDD) as an approach for software development Write automated functional test cases Get the best of DevOps principles to enable CI/CD environments Who this book is for This book is for engineers and senior software developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Basic familiarity with C# and .NET is required to get the most out of this book.

The TOGAF 9 certification program is a knowledge-based certification program. It has two levels, leading to certification for TOGAF 9 Foundation and TOGAF 9 Certified, respectively. The purpose of certification to TOGAF 9 Certified is to provide validation that, in addition to the knowledge and comprehension of TOGAF 9 Foundation level, the Candidate is able to analyze and apply this knowledge. The learning objectives at this level therefore focus on application and analysis in addition to knowledge and comprehension. This Study Guide supports students in preparation for the TOGAF 9 Part 2 Examination, leading to TOGAF 9 Certified.

With C# and Visual Basic .NET

Microservices Patterns

Architecture and Implementation

Network Programming in .NET

.NET DevOps for Azure

ASP.NET Core Application Development

Get Your Hands Dirty on Clean Architecture

Celebrate Thanksgiving with Annie and Snowball in this Level 2 Ready-to-Read story from the Theodor Seuss Geisel Award-winning creators of Henry and Mudge! Annie loves fall and she especially loves Thanksgiving. There is a big table at Annie's house, and she wants lots of people around it for a yummy dinner. But Annie lives with just her dad and her bunny, Snowball. She doesn't have a big family of her own. Who can she invite to share Thanksgiving?

In-depth examination of concepts and principles of Web application development Completely revised and updated, this popular book returns with coverage on a range of new technologies. Authored by a highly respected duo, this edition provides an in-depth examination of the core concepts and general principles of Web application development. Packed with examples featuring specific technologies, this book is divided into three sections: HTTP protocol as a foundation for Web applications, markup languages (HTML, XML, and CSS), and survey of emerging technologies. After a detailed introduction to the history of Web applications, coverage segues to core Internet protocols, Web browsers, Web application development, trends and directions, and more. Includes new coverage on technologies such as application primers, Ruby on Rails, SOAP, XPath, P3P, and more Explores the fundamentals of HTTP and its evolution Looks at HTML and its roots as well as XML languages and applications Reviews the basic operation of Web Servers, their functionality, configuration, and security Discusses how to process flow in Web browsers and looks at active browser pages Addresses the trends and various directions that the future of Web application frameworks may be headed This book is essential reading for anyone who needs to design or debug complex systems, and it makes it easier to learn the new application programming interfaces that arise in a rapidly changing Internet environment.

A beginner's guide to building fully functioning web applications from scratch using the latest features of ASP.NET Core 3 and C# 8 Key Features Get to grips with the new features and APIs in ASP.NET Core 3, EF Core 3, and Blazor Create web APIs that integrate your applications with other systems and services Learn to deploy your web applications in new environments such as the cloud and Docker containers Book Description ASP.NET Core is an open source framework from Microsoft that makes it easy to build highly efficient and dynamic cross-platform web applications. Updated for the latest features of ASP.NET Core 3, this second edition will equip you with the skills you need to build powerful web applications. The book starts with an introduction to ASP.NET Core and its features, giving you a complete understanding of the framework. You will also learn how to set up your development environment with Visual Studio 2019 and build a fully functioning application from scratch. You'll then understand core concepts for building web applications such as Model View Controller (MVC), dependency injection, and WebSockets. As you advance, you'll discover how to use Entity Framework Core 3 to automate all database-related activities for your application. You will then build and document secure web APIs using security best practices to protect your web applications from threats and vulnerabilities. Finally, you will learn how to use Azure DevOps as a CI/CD tool to deploy and monitor your applications using Microsoft Azure, Amazon Web Services (AWS), and Docker. By the end of this book, you'll have the skills you need to develop efficient and robust web applications in ASP.NET Core 3. What you will learn Delve into basic and advanced ASP.NET Core 3 concepts with the help of examples Build an MVC web application and use Entity Framework Core 3 to access data Add web APIs to your web applications using RPC, REST, and HATEOAS Create a fully automated continuous integration and continuous delivery (CI/CD) pipeline using Azure DevOps Use Azure, Amazon Web Services, and Docker to deploy and monitor your applications Secure your web application from common attacks such as Cross-Site Scripting and SQL injection Explore client-side development using C# Razor components Who this book is for This book is for developers who want to build modern web applications with ASP.NET Core. The book will also be helpful for anyone working in infrastructure engineering and operations to monitor and diagnose problems during the runtime of ASP.NET Core 3.0 web applications. Although no prior understanding of ASP.NET or .NET Core is required, basic C# programming knowledge is assumed.

With in-depth coverage of Microsoft's powerful new Visual C++ .NET and the broader .NET environment, this book has practical introductions to .NET Framework and CLR, ADO.NET database access, security, interoperability, ATL Server and Web Services, and more.

C#.Net Developer's Guide

Building an application in four sprints

Distributed Simulation

Cloud Native Patterns

Software Architecture with C# 9 and .NET 5

A Model Driven Engineering Approach

Getting Started with IBM API Connect: Scenarios Guide

This unique text/reference provides a comprehensive review of distributed simulation (DS) from the perspective of Model Driven Engineering (MDE), illustrating how MDE affects the overall lifecycle of the simulation development process. Numerous practical case studies are included to demonstrate the utility and applicability of the methodology, many of which are developed from tools available to download from the public domain. Topics and features: Provides a thorough introduction to the fundamental concepts, principles and processes of modeling and simulation, MDE and high-level architecture Describes a road map for building a DS system in accordance with the MDE perspective, and a technical framework for the development of conceptual models Presents a focus on federate (simulation environment) architectures, detailing a practical approach to the design of federations (i.e., simulation member design) Discusses the main activities related to scenario management in DS, and explores the process of MDE-based implementation, integration and testing Reviews approaches to simulation evolution and modernization, including architecture-driven modernization for simulation modernization Examines the potential synergies between the agent, DS, and MDE methodologies, suggesting avenues for future research at the intersection of these three fields Distributed Simulation - A Model Driven Engineering Approach is an important resource for all researchers and practitioners involved in modeling and simulation, and software engineering, who may be interested in adopting MDE principles when developing complex DS systems.

Summary SPA Design and Architecture teaches you the design and development skills you need to create SPAs. Includes an overview of MV* frameworks, unit testing, routing, layout management, data access, pub/sub, and client-side task automation. This book is full of easy-to-follow examples you can apply to the library or framework of your choice. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The next step in the development of web-based software, single-page web applications deliver the sleekness and fluidity of a native desktop application in a browser. If you're ready to make the leap from traditional web applications to SPAs, but don't know where to begin, this book will get you going. About the Book SPA Design and Architecture teaches you the design and development skills you need to create SPAs. You'll start with an introduction to the SPA model and see how it builds on the standard approach using linked pages. The author guides you through the practical issues of building an SPA, including an overview of MV* frameworks, unit testing, routing, layout management, data access, pub/sub, and client-side task automation. This book is full of easy-to-follow examples you can apply to the library or framework of your choice. What's Inside Working with modular JavaScript Understanding MV* frameworks Layout management Client-side task automation Testing SPAs About the Reader This book assumes you are a web developer and know JavaScript basics. About the Author Emmit Scott is a senior software engineer and architect with experience building large-scale, web-based applications. Table of Contents PART 1 THE BASICS What is a single-page application? The role of MV* frameworks Modular JavaScript PART 2 CORE CONCEPTS Navigating the single page View composition and layout Inter-module interaction Communicating with the server Unit testing Client-side task automation APPENDIXES Employee directory example walk-through Review of the XMLHttpRequest API Chapter 7 server-side setup and summary Installing Node.js and Gulp.js

Learn about the responsibilities of a .NET solution architect and explore solution architecture principles, DevOps solutions, and design techniques and standards with hands-on examples of design patterns Key Features Find out what are the essential personality traits and responsibilities of a solution architect Become well-versed with architecture principles and modern design patterns with hands-on examples Design modern web solutions and make the most of Azure DevOps to automate your development life cycle Book Description Understanding solution architecture is a must to build and integrate robust systems to meet your client's needs. This makes it crucial for a professional .NET software engineer to learn the key skills of a .NET solution architect to create a unique digital journey and build solutions for a wide range of industries, from strategy and design to implementation. With this handbook, developers working with the .NET technology will be able to put their knowledge to work. The book takes a hands-on approach to help you become an effective solution architect. You'll start by learning the principles of the software development life cycle (SDLC), the roles and responsibilities of a .NET solution architect, and what makes a great .NET solution architect. As you make progress through the chapters, you'll understand the principles of solution architecture and how to design a solution, and explore designing layers and microservices. You'll complete your learning journey by uncovering modern design patterns and techniques for designing and building digital solutions. By the end of this book, you'll have learned how to architect your modern web solutions with ASP.NET Core and Microsoft Azure and be ready to automate your development life cycle with Azure DevOps. What you will learn Understand the role and core responsibilities of a .NET solution architect Study popular UML (Unified Modeling Language) diagrams for solution architecture Work with modern design patterns with the help of hands-on examples Become familiar with microservices and designing layers Discover how to design modern web solutions Automate your development life cycle with Azure DevOps Who this book is for This book is for intermediate and advanced .NET developers and software engineers who want to advance their careers and expand their knowledge of solution architecture and design principles. Beginner or intermediate-level solution architects looking for tips and tricks to build large-scale .NET solutions will find this book useful.

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 IHttpClientFactory 22 Building background tasks and services 23 Testing your application

Essential Software Architecture

NET Web Services

Microsoft .NET - Architecting Applications for the Enterprise

Clean Architecture

TOGAF® 9 Certified Study Guide - 2nd Edition

Net Zero Energy Design

ASP.NET Core in Action

Get expert architectural and design-level guidance for building distributed solutions with the Microsoft® .NET Framework—learning how to synthesize your knowledge of application development, servers, and infrastructure and business requirements. This guide assumes you are familiar with .NET component development and the basic principles of a layered distributed application design. It examines architectural issues and solution design for a range of project stakeholders—whether you build and design applications and services, recommend appropriate technologies and products for applications and services, make design decisions to meet functional and nonfunctional requirements, or choose appropriate communications mechanisms for applications and services—providing straightforward guidance, recommendations, and best practices gleaned from real-world solution development. All PATTERNS & PRACTICES guides are reviewed and approved by Microsoft engineering teams, consultants, partners, and customers—delivering accurate, real-world information that's been technically validated and tested.

Building secure distributed Web applications can be challenging. It usually involves integrating several different technologies and products—yet your complete application will only be as secure as its weakest link. This guide presents a practical, scenario-driven approach to designing and building security-enhanced ASP.NET applications for Microsoft® Windows® 2000 and version 1.1 of the Microsoft .NET Framework. It focuses on the key elements of authentication, authorization, and secure communication within and across the tiers of distributed .NET Web applications. This guide focuses on: Authentication—to identify the clients of your application Authorization—to provide access controls for those clients Secure communication—to help ensure that messages remain private and are not altered by unauthorized parties Who should read this guide: Middleware developers and architects who build or plan to build .NET Web applications using ASP.NET, XML Web Services, Enterprise Services (COM+), .NET Remoting, or Microsoft ADO.NET About "Patterns and Practices": Patterns & Practices contain specific recommendations illustrating how to design, build, deploy, and operate architecturally sound solutions to challenging business and technical scenarios. The technical guidance is reviewed and approved by Microsoft engineering teams, consultants, and Product Support Services, and by partners and customers. Note: Includes complete sample on the Web.

Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications. What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

As we all know by now, wireless networks offer many advantages over fixed (or wired) networks. Foremost on that list is mobility, since going wireless frees you from the tether of an Ethernet cable at a desk. But that's just the tip of the cable-free iceberg. Wireless networks are also more flexible, faster and easier for you to use, and more affordable to deploy and maintain. The de facto standard for wireless networking is the 802.11 protocol, which includes Wi-Fi (the wireless standard known as 802.11b) and its faster cousin, 802.11g. With easy-to-install 802.11 network hardware available everywhere you turn, the choice seems simple, and many people dive into wireless computing with less thought and planning than they'd give to a wired network. But it's wise to be familiar with both the capabilities and risks associated with the 802.11 protocols. And 802.11 Wireless Networks: The Definitive Guide, 2nd Edition is the perfect place to start. This updated edition covers everything you'll ever need to know about wireless technology. Designed with the system administrator or serious home user in mind, it's a no-nonsense guide for setting up 802.11 on Windows and Linux. Among the wide range of topics covered are discussions on: deployment considerations network monitoring and performance tuning wireless security issues how to use and select access points network monitoring essentials wireless card configuration security issues unique to wireless networks With wireless technology, the advantages to its users are indeed plentiful. Companies no longer have to deal with the hassle and expense of wiring buildings, and households with several computers can avoid fights over who's online. And now, with 802.11 Wireless Networks: The Definitive Guide, 2nd Edition, you can integrate wireless technology into your current infrastructure with the utmost confidence.

A Handbook of Agile Software Craftsmanship

Architecting software solutions using microservices, DevOps, and design patterns for Azure, 2nd Edition

The Encyclopaedia Britannica

Microsoft Application Architecture Guide

An Architectural Guidebook to Portland

A Dictionary of Arts, Sciences, Literature and General Information

Designing Applications and Services

Summary Cloud Native Patterns is your guide to developing strong applications that thrive in the dynamic, distributed, virtual world of the cloud. This book presents a mental model for cloud-native applications, along with the patterns, practices, and tooling that set them apart. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Cloud platforms promise the holy grail: near-zero downtime, infinite scalability, short feedback cycles, fault-tolerance, and cost control. But how do you get there? By applying cloudnative designs, developers can build resilient, easily adaptable, web-scale distributed applications that handle massive user traffic and data loads. Learn these fundamental patterns and practices, and you'll be ready to thrive in the dynamic, distributed, virtual world of the cloud. About the Book With 25 years of experience under her belt, Cornelia Davis teaches you the practices and patterns that set cloud-native applications apart. With realistic examples and expert advice for working with apps, data, services, routing, and more, she shows you how to design and build software that functions beautifully on modern cloud platforms. As you read, you will start to appreciate that cloud-native computing is more about the how and why rather than the where. What's inside The lifecycle of cloud-native apps Cloud-scale configuration management Zero downtime upgrades, versioned services, and parallel deploys Service discovery and dynamic routing Managing interactions between services, including retries and circuit breakers About the Reader Requires basic software design skills and an ability to read Java or a similar language. About the Author Cornelia Davis is Vice President of Technology at Pivotal Software. A teacher at heart, she's spent the last 25 years making good software and great software developers. Table of Contents PART 1 - THE CLOUD-NATIVE CONTEXT You keep using that word: Defining "cloud-native" Running cloud-native applications in production The platform for cloud-native software PART 2 - CLOUD-NATIVE PATTERNS Event-driven microservices: It's not just request/response App redundancy: Scale-out and statelessness Application configuration: Not just environment variables The application lifecycle: Accounting for constant change Accessing apps: Services, routing, and service discovery Interaction redundancy: Retries and other control loops Fronting services: Circuit breakers and API gateways Troubleshooting: Finding the needle in the haystack Cloud-native data: Breaking the data monolith

Written by an architect who is director of sustainability at a global architecture firm, this is a guide for architects and related construction professionals to design and build net zero commercial architecture. It offers practical strategies, step-by-step technical analysis, and valuable examples in addition to developed case studies. With a focus on application in a variety of building types and scales, the book also develops a broad based understanding of all the integrated principles involved in achieving net zero energy. The book is a practical guide for anyone venturing into net zero energy design, construction and operation, and also serves as an excellent resource on a variety of sustainable design topics.

Application Architecture for .NET