

Access PDF Refactoring Databases Evolutionary Database Design Addison Wesley Signature Series Fowler

Eventually, you will agree to discover a new experience and carrying out by spending more cash. still when? do you assume that you require to get those every needs in the manner of having significantly cash? Why dont you try to get something basic in the beginning? Thats something that will guide you to understand even more with reference to the globe, experience, some places, in imitation of history, amusement, and a lot more?

It is your enormously own times to play a part reviewing habit. in the course of guides you could enjoy now is **Refactoring Databases Evolutionary Database Design Addison Wesley Signature Series Fowler** below.

509X21 - MELENDEZ BRODY

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

A quick and reliable way to build proven databases for core business functions Industry experts raved about The Data Model Resource Book when it was first published in March 1997 because it provided a simple, cost-effective way to design databases for core business functions. Len Silverston has now revised and updated the hugely successful 1st Edition, while adding a companion volume to take care of more specific requirements of different businesses. This updated volume provides a common set of data models for specific core functions shared by most businesses like human resources management, accounting, and project management. These models are standardized and are easily replicated by developers looking for ways to make corporate database development more efficient and cost effective. This guide is the perfect complement to The Data Model Resource CD-ROM, which is sold separately and provides the powerful design templates discussed in the book in a ready-to-use electronic format. A free demonstration CD-ROM is available with each copy of the print book to allow you to try before you buy the full CD-ROM.

For those considering Extreme Programming, this book provides no-nonsense advice on agile planning, development, delivery, and management taken from the authors' many years of experience. While plenty of books address the what and why of agile development, very few offer the information users can apply directly.

Solve complex business problems by understanding users better, finding the right problem to solve, and building lean event-driven systems to give your customers what they really want Key Features· Apply DDD principles using modern tools such as EventStorming, Event Sourcing, and CQRS· Learn how DDD applies directly to various architectural styles such as REST, reactive systems, and microservices· Empower teams to work flexibly with improved services and decoupled interactions· Book Description Developers across the world are rapidly adopting DDD principles to deliver powerful results when writing software that deals with complex business requirements. This book will guide you in involving business stakeholders when choosing the software you are planning to build for them. By figuring out the temporal nature of behavior-driven domain models, you will be able to build leaner, more agile, and modular systems. You'll begin by uncovering domain complexity and learn how to capture the behavioral aspects of the domain language. You will then learn about EventStorming and advance to creating a new project in .NET Core 2.1; you'll also and write some code to transfer your events from sticky notes to C#. The book will show you how to use aggregates to handle commands and produce events. As you progress, you'll get to grips with Bounded Contexts, Context Map, Event Sourcing, and CQRS. After translating domain models into executable C# code, you will create a frontend for your application using Vue.js. In addition to this, you'll learn how to refactor your code and cover event versioning and migration essentials. By the end of this DDD book, you will have gained the confidence to implement the DDD approach in your organization and be able to explore new techniques that complement what you've learned from the book. What you will learn· Discover and resolve domain complexity together with business stakeholders· Avoid common pitfalls when creating the domain model· Study the concept of Bounded Context and aggregate· Design and build temporal models based on behavior and not only data· Explore benefits and drawbacks of Event Sourcing· Get acquainted with CQRS and to-the-point read models with projections· Practice building one-way flow UI with Vue.js· Understand how a task-based UI conforms to DDD principles· Who this book is for This book is for .NET developers who have an intermediate level understanding of C#, and for those who seek to deliver value, not just write code. Intermediate level of competence in JavaScript will be helpful to follow the UI chapters.

This is the eBook version of the printed book. The past few years have seen the rise of agile or evolutionary methods in software development. These methods embrace change in requirements even late in the project. The ability to change software is because of certain practices that are followed within teams, such as Test Driven Development, Pair Programming, and Continuous Integration. Continuous Integration provides a way for software teams to integrate their work more than once a day, and promotes confidence in the software that is being developed by the team. It is thought that this practice is difficult to apply when continuously integrating the database with application code; hence, Evolutionary Database Development is considered a mismatch with agile methods. Pramod Sadalage shows that this is not necessarily true. Continuous Integration changed the way software is written. Why not extend and make the database part of the same Continuous Integration cycle so that you can see integrated results of your application as well as your database? Delivered in PDF format for quick and easy access, Recipes for Continuous Database Integration shows how the

database can be brought under the preview of Continuous Integration, allowing all teams to integrate not only their application code, but also their database. This Short Cut presents a recipe for each task that needs to be done. Each recipe starts with a statement of a problem, followed by an explanation and solution. It provides concrete ways and examples to implement ideas in Refactoring Databases: Evolutionary Database Design by Scott W Ambler and Pramod Sadalage. Table of Contents What This Short Cut Covers Introduction Recipe 1 Continuously Integrating? Recipe 2 Extracting Your Database in Scripts Recipe 3 Using Version Control for Your Database Recipe 4 Automating Database or Schema Creation Recipe 5 Creating Objects in Your Database Recipe 6 Removing Database Objects Recipe 7 Removing Your Database Recipe 8 Using the Build Property Files Recipe 9 Re-Creating Your Application Database for Any Build Recipe 10 Making It Easy for New Developers to Join the Team Recipe 11 Integrating on Every Check-In Recipe 12 Naming Upgrade Scripts Recipe 13 Automating Database Change Script Creation Recipe 14 Implementing Database Version Checking Recipe 15 Sending Upgrades to Customers Sample Code Further Reading About the Author What's in the Companion Book Related Publication

The acclaimed beginner's book on object technology now presents UML 2.0, Agile Modeling, and object development techniques.

Discover how graph databases can help you manage and query highly connected data. With this practical book, you'll learn how to design and implement a graph database that brings the power of graphs to bear on a broad range of problem domains. Whether you want to speed up your response to user queries or build a database that can adapt as your business evolves, this book shows you how to apply the schema-free graph model to real-world problems. Learn how different organizations are using graph databases to outperform their competitors. With this book's data modeling, query, and code examples, you'll quickly be able to implement your own solution. Model data with the Cypher query language and property graph model Learn best practices and common pitfalls when modeling with graphs Plan and implement a graph database solution in test-driven fashion Explore real-world examples to learn how and why organizations use a graph database Understand common patterns and components of graph database architecture Use analytical techniques and algorithms to mine graph database information

Discover how graph databases can help you manage and query highly connected data. With this practical book, you'll learn how to design and implement a graph database that brings the power of graphs to bear on a broad range of problem domains. Whether you want to speed up your response to user queries or build a database that can adapt as your business evolves, this book shows you how to apply the schema-free graph model to real-world problems. This second edition includes new code samples and diagrams, using the latest Neo4j syntax, as well as information on new functionality. Learn how different organizations are using graph databases to outperform their competitors. With this book's data modeling, query, and code examples, you'll quickly be able to implement your own solution. Model data with the Cypher query language and property graph model Learn best practices and common pitfalls when modeling with graphs Plan and implement a graph database solution in test-driven fashion Explore real-world examples to learn how and why organizations use a graph database Understand common patterns and components of graph database architecture Use analytical techniques and algorithms to mine graph database information

There are no easy decisions in software architecture. Instead, there are many hard parts—difficult problems or issues with no best practices—that force you to choose among various compromises. With this book, you'll learn how to think critically about the trade-offs involved with distributed architectures. Architecture veterans and practicing consultants Neal Ford, Mark Richards, Pramod Sadalage, and Zhamak Dehghani discuss strategies for choosing an appropriate architecture. By interweaving a story about a fictional group of technology professionals—the Sysops Squad—they examine everything from how to determine service granularity, manage workflows and orchestration, manage and decouple contracts, and manage distributed transactions to how to optimize operational characteristics, such as scalability, elasticity, and performance. By focusing on commonly asked questions, this book provides techniques to help you discover and weigh the trade-offs as you confront the issues you face as an architect. Analyze trade-offs and effectively document your decisions Make better decisions regarding service granularity Understand the complexities of breaking apart monolithic applications Manage and decouple contracts between services Handle data in a highly distributed architecture Learn patterns to manage workflow and transactions when breaking apart applications

We're at an inflection point in data, where our data management solutions no longer match the complexity of organizations, the proliferation of data sources, and the scope of our aspirations to get value from data with AI and analytics. In this practical book, author Zhamak Dehghani introduces data mesh, a decentralized sociotechnical paradigm drawn from modern distributed architecture that provides a new approach to sourcing, sharing, accessing, and managing analytical data at scale. Dehghani guides practitioners, architects, technical leaders, and decision makers on their journey from traditional big data architecture to a distributed and multidimensional approach to analytical data management. Data mesh treats data as a product, considers domains as a primary concern, applies platform thinking to create self-serve data infrastructure, and introduces a federated computational model of data governance. Get a complete introduction to data mesh principles and its constituents Design a data mesh architecture Guide a data mesh strategy and execution Navigate organizational design to a decentralized data ownership model Move beyond traditional data warehouses and lakes to a distributed data mesh

A computer security expert shows readers how to build more secure software by building security in and putting it into practice. The CD-ROM contains a tutorial and demo of the Fortify Source Code Analysis Suite.

Using Agile methods, you can bring far greater innovation, value, and quality to any data warehousing (DW), business intelligence (BI), or analytics project. However, conventional Agile methods must be carefully adapted to address the unique characteristics of DW/BI projects. In Agile Analytics, Agile pioneer Ken Collier shows how to do just that. Collier introduces platform-agnostic Agile solutions for integrating infrastructures consisting of diverse operational, legacy, and specialty systems that mix commercial and custom code. Using working examples, he shows how to manage analytics development teams with widely diverse skill sets and how to support enormous and fast-growing data vol-

umes. Collier's techniques offer optimal value whether your projects involve "back-end" data management, "front-end" business analysis, or both. Part I focuses on Agile project management techniques and delivery team coordination, introducing core practices that shape the way your Agile DW/BI project community can collaborate toward success Part II presents technical methods for enabling continuous delivery of business value at production-quality levels, including evolving superior designs; test-driven DW development; version control; and project automation Collier brings together proven solutions you can apply right now--whether you're an IT decision-maker, data warehouse professional, database administrator, business intelligence specialist, or database developer. With his help, you can mitigate project risk, improve business alignment, achieve better results--and have fun along the way.

The software development ecosystem is constantly changing, providing a constant stream of new tools, frameworks, techniques, and paradigms. Over the past few years, incremental developments in core engineering practices for software development have created the foundations for rethinking how architecture changes over time, along with ways to protect important architectural characteristics as it evolves. This practical guide ties those parts together with a new way to think about architecture and time.

The Definitive Refactoring Guide, Fully Revamped for Ruby With refactoring, programmers can transform even the most chaotic software into well-designed systems that are far easier to evolve and maintain. What's more, they can do it one step at a time, through a series of simple, proven steps. Now, there's an authoritative and extensively updated version of Martin Fowler's classic refactoring book that utilizes Ruby examples and idioms throughout--not code adapted from Java or any other environment. The authors introduce a detailed catalog of more than 70 proven Ruby refactorings, with specific guidance on when to apply each of them, step-by-step instructions for using them, and example code illustrating how they work. Many of the authors' refactorings use powerful Ruby-specific features, and all code samples are available for download. Leveraging Fowler's original concepts, the authors show how to perform refactoring in a controlled, efficient, incremental manner, so you methodically improve your code's structure without introducing new bugs. Whatever your role in writing or maintaining Ruby code, this book will be an indispensable resource. This book will help you Understand the core principles of refactoring and the reasons for doing it Recognize "bad smells" in your Ruby code Rework bad designs into well-designed code, one step at a time Build tests to make sure your refactorings work properly Understand the challenges of refactoring and how they can be overcome Compose methods to package code properly Move features between objects to place responsibilities where they fit best Organize data to make it easier to work with Simplify conditional expressions and make more effective use of polymorphism Create interfaces that are easier to understand and use Generalize more effectively Perform larger refactorings that transform entire software systems and may take months or years Successfully refactor Ruby on Rails code

The infrastructure-as-code revolution in IT is also affecting database administration. With this practical book, developers, system administrators, and junior to mid-level DBAs will learn how the modern practice of site reliability engineering applies to the craft of database architecture and operations. Authors Laine Campbell and Charity Majors provide a framework for professionals looking to join the ranks of today's database reliability engineers (DBRE). You'll begin by exploring core operational concepts that DBREs need to master. Then you'll examine a wide range of database persistence options, including how to implement key technologies to provide resilient, scalable, and performant data storage and retrieval. With a firm foundation in database reliability engineering, you'll be ready to dive into the architecture and operations of any modern database. This book covers: Service-level requirements and risk management Building and evolving an architecture for operational visibility Infrastructure engineering and infrastructure management How to facilitate the release management process Data storage, indexing, and replication Identifying datastore characteristics and best use cases Datastore architectural components and data-driven architectures

Microservices is an architectural style in which large, complex software applications are composed of one or more smaller services. Each of these microservices focuses on completing one task that represents a small business capability. These microservices can be developed in any programming language. This IBM® Redbooks® publication shows how to break out a traditional Java EE application into separate microservices and provides a set of code projects that illustrate the various steps along the way. These code projects use the IBM WebSphere® Application Server Liberty, IBM API Connect™, IBM Bluemix®, and other Open Source Frameworks in the microservices ecosystem. The sample projects highlight the evolution of monoliths to microservices with Java and Node.

Master IBM's Breakthrough DAD Process Framework for Succeeding with Agile in Large, Complex, Mission-Critical IT Projects It is widely recognized that moving from traditional to agile approaches to build software solutions is a critical source of competitive advantage. Mainstream agile approaches that are indeed suitable for small projects require significant tailoring for larger, complex enterprise projects. In Disciplined Agile Delivery, Scott W. Ambler and Mark Lines introduce IBM's breakthrough Disciplined Agile Delivery (DAD) process framework, which describes how to do this tailoring. DAD applies a more disciplined approach to agile development by acknowledging and dealing with the realities and complexities of a portfolio of interdependent program initiatives. Ambler and Lines show how to extend Scrum with supplementary agile and lean strategies from Agile Modeling (AM), Extreme Programming (XP), Kanban, Unified Process (UP), and other proven methods to provide a hybrid approach that is adaptable to your organization's unique needs. They candidly describe what practices work best, why they work, what the trade-offs are, and when to consider alternatives, all within the context of your situation. Disciplined Agile Delivery addresses agile practices across the entire lifecycle, from requirements, architecture, and development to delivery and governance. The authors show how these best-practice techniques fit together in an end-to-end process for successfully delivering large, complex systems--from project initiation through delivery. Coverage includes Scaling agile for mission-critical enterprise endeavors Avoiding mistakes that drive poorly run agile projects to chaos Effectively initiating an agile project Transitioning as an individual to agile Incrementally building consumable solutions Deploying agile solutions into complex production environments Leveraging DevOps, architecture, and other enterprise disciplines Adapting your governance strategy for agile projects Based on facts, research, and extensive experience, this book will be an indispensable resource for every enterprise software leader and practitioner--whether they're seeking to optimize their existing agile/Scrum process or improve the agility of an iterative process.

Get the most out of the rich development capabilities of SQL Server 2016 to build efficient database applications for your organization About This Book Utilize the new enhancements in Transact-SQL and security features in SQL Server 2016 to build efficient database applications Work with temporal tables to get information about data stored in the table at any point in time A detailed guide to SQL Server 2016, introducing you to multiple new features and enhancements to improve your overall development experience Who This Book Is For This book is for database developers and solution architects who plan to use the new SQL Server 2016 features for developing efficient database applications. It is also ideal for experienced SQL Server developers who want to switch to SQL Server 2016 for its rich development capabilities. Some understanding of the basic database concepts and Transact-SQL language is assumed. What You Will Learn Explore the new development features introduced in SQL Server 2016 Identify opportunities for In-Memory OLTP technology, significantly en-

hanced in SQL Server 2016 Use columnstore indexes to get significant storage and performance improvements Extend database design solutions using temporal tables Exchange JSON data between applications and SQL Server in a more efficient way Migrate historical data transparently and securely to Microsoft Azure by using Stretch Database Use the new security features to encrypt or to have more granular control over access to rows in a table Simplify performance troubleshooting with Query Store Discover the potential of R's integration with SQL Server In Detail Microsoft SQL Server 2016 is considered the biggest leap in the data platform history of the Microsoft, in the ongoing era of Big Data and data science. Compared to its predecessors, SQL Server 2016 offers developers a unique opportunity to leverage the advanced features and build applications that are robust, scalable, and easy to administer. This book introduces you to new features of SQL Server 2016 which will open a completely new set of possibilities for you as a developer. It prepares you for the more advanced topics by starting with a quick introduction to SQL Server 2016's new features and a recapitulation of the possibilities you may have already explored with previous versions of SQL Server. The next part introduces you to small delights in the Transact-SQL language and then switches to a completely new technology inside SQL Server - JSON support. We also take a look at the Stretch database, security enhancements, and temporal tables. The last chapters concentrate on implementing advanced topics, including Query Store, columnstore indexes, and In-Memory OLTP. You will finally be introduced to R and how to use the R language with Transact-SQL for data exploration and analysis. By the end of this book, you will have the required information to design efficient, high-performance database applications without any hassle. Style and approach This book is a detailed guide to mastering the development features offered by SQL Server 2016, with a unique learn-as-you-do approach. All the concepts are explained in a very easy-to-understand manner and are supplemented with examples to ensure that you--the developer--are able to take that next step in building more powerful, robust applications for your organization with ease.

The practice of Test-Driven Development (TDD) has helped thousands of software developers improve quality, agility, productivity, and speed. In Test-Driven Database Development, Max Guernsey, III shows how to adapt TDD to achieve the same powerful benefits in database design and development. Guernsey first explains why TDD offers so much potential to database practitioners, and how to overcome obstacles such as the lack of conventional "testable classes." You'll learn how to use "classes of databases" to manage change more effectively; how to define testable database behaviors; how to maximize long-term maintainability by limiting a database's current scope; and how to use "emergent design" to simplify future expansion. Building on this foundation, the author guides you through implementing modern TDD processes and database refactoring. He presents practical techniques for improving legacy databases; for deviating from strict TDD when necessary; and for adapting TDD to applications that persist data in file systems, XML, or serialized objects. Guernsey shows how to * Build a simple infrastructure to track and standardize scripts and databases * Define a sustainable TDD process for database design * Safely change a design without losing data * Design new databases that are lighter, leaner, simpler, more testable, and easier to change * Reduce design costs by eliminating duplication * Gradually bring the benefits of TDD, agility, and modern design to legacy databases * Remediate errors that find their way into database designs * Isolate behaviors and avoid unwanted dependencies that cause tests to fail With this book as a guide, you will learn how to apply the proven practice of TDD to your database needs, and organize and optimize your organization's data for a significant competitive advantage. Test-Driven Database Development is the newest title in the highly respected NetObjectives Lean-Agile Series.

This text aims to help all members of the development team make the correct nuts-and-bolts architecture decisions that ensure project success.

Annotation Over the past 10 years, distributed systems have become more fine-grained. From the large multi-million line long monolithic applications, we are now seeing the benefits of smaller self-contained services. Rather than heavy-weight, hard to change Service Oriented Architectures, we are now seeing systems consisting of collaborating microservices. Easier to change, deploy, and if required retire, organizations which are in the right position to take advantage of them are yielding significant benefits. This book takes an holistic view of the things you need to be cognizant of in order to pull this off. It covers just enough understanding of technology, architecture, operations and organization to show you how to move towards finer-grained systems.

& Most software practitioners deal with inherited code; this book teaches them how to optimize it & & Workbook approach facilitates the learning process & & Helps you identify where problems in a software application exist or are likely to exist

Concise and easy-to-understand guidelines and standards for creating UML 2.0 diagrams.

Refactoring has proven its value in a wide range of development projects--helping software professionals improve system designs, maintainability, extensibility, and performance. Now, for the first time, leading agile methodologist Scott Ambler and renowned consultant Pramodkumar Sadalage introduce powerful refactoring techniques specifically designed for database systems. Ambler and Sadalage demonstrate how small changes to table structures, data, stored procedures, and triggers can significantly enhance virtually any database design--without changing semantics. You'll learn how to evolve database schemas in step with source code--and become far more effective in projects relying on iterative, agile methodologies. This comprehensive guide and reference helps you overcome the practical obstacles to refactoring real-world databases by covering every fundamental concept underlying database refactoring. Using start-to-finish examples, the authors walk you through refactoring simple standalone database applications as well as sophisticated multi-application scenarios. You'll master every task involved in refactoring database schemas, and discover best practices for deploying refactorings in even the most complex production environments. The second half of this book systematically covers five major categories of database refactorings. You'll learn how to use refactoring to enhance database structure, data quality, and referential integrity; and how to refactor both architectures and methods. This book provides an extensive set of examples built with Oracle and Java and easily adaptable for other languages, such as C#, C++, or VB.NET, and other databases, such as DB2, SQL Server, MySQL, and Sybase. Using this book's techniques and examples, you can reduce waste, rework, risk, and cost--and build database systems capable of evolving smoothly, far into the future.

The Elements of Java Style, written by renowned author Scott Ambler, Rogue Wave Software Vice President Alan Vermeulen, and a team of programmers from Rogue Wave, is for anyone who writes Java code. While there are many books that explain the syntax and basic use of Java, this book, first published in 2000, explains not just what you can do with the syntax, but what you ought to do. Just as Strunk and White's The Elements of Style provides rules of usage for the English language, this book provides a set of rules for Java practitioners to follow. While illustrating these rules with parallel examples of correct and incorrect usage, the book provides a collection of standards, conventions, and guidelines for writing solid Java code which will be easy to understand, maintain, and enhance. Anyone who writes Java code or plans to should have this book next to their computer.

To keep programming productive and enjoyable, state-of-the-art practices and principles are essential. Object-oriented programming and design help manage complexity by keeping components cleanly separated. Unit testing helps prevent endless, exhausting debugging sessions. Refactoring keeps code supple and readable. PHP offers all this--and more. PHP in Action shows you how to apply PHP

techniques and principles to all the most common challenges of web programming, including: Web presentation and templates User interaction including the Model-View-Controller architecture Input validation and form handling Database connection and querying and abstraction Object persistence 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.

"This comprehensive guide and reference helps you overcome the practical obstacles to refactoring real-world databases by covering every fundamental concept underlying database refactoring. Using start-to-finish examples, the authors walk you through refactoring simple standalone database applications as well as sophisticated multi-application scenarios. You'll master every task involved in refactoring database schemas, and discover best practices for deploying refactorings in even the most complex production environments."--Jacket.

Thoroughly reviewed and eagerly anticipated by the agile community, User Stories Applied offers a requirements process that saves time, eliminates rework, and leads directly to better software. The best way to build software that meets users' needs is to begin with "user stories": simple, clear, brief descriptions of functionality that will be valuable to real users. In User Stories Applied, Mike Cohn provides you with a front-to-back blueprint for writing these user stories and weaving them into your development lifecycle. You'll learn what makes a great user story, and what makes a bad one. You'll discover practical ways to gather user stories, even when you can't speak with your users. Then, once you've compiled your user stories, Cohn shows how to organize them, prioritize them, and use them for planning, management, and testing. User role modeling: understanding what users have in common, and where they differ Gathering stories: user interviewing, questionnaires, observation, and workshops Working with managers, trainers, salespeople and other "proxies" Writing user stories for acceptance testing Using stories to prioritize, set schedules, and estimate release costs Includes end-of-chapter practice questions and exercises User Stories Applied will be invaluable to every software developer, tester, analyst, and manager working with any agile method: XP, Scrum... or even your own home-grown approach.

Awareness of design smells - indicators of common design problems - helps developers or software engineers understand mistakes made while designing, what design principles were overlooked or misapplied, and what principles need to be applied properly to address those smells through refactoring. Developers and software engineers may "know" principles and patterns, but are not aware of the "smells" that exist in their design because of wrong or mis-application of principles or patterns. These smells tend to contribute heavily to technical debt - further time owed to fix projects thought to be complete - and need to be addressed via proper refactoring. Refactoring for Software Design Smells presents 25 structural design smells, their role in identifying design issues, and potential refactoring solutions. Organized across common areas of software design, each smell is presented with diagrams and examples illustrating the poor design practices and the problems that result, creating a catalog of nuggets of readily usable information that developers or engineers can apply in their projects. The authors distill their research and experience as consultants and trainers, providing insights that have been used to improve refactoring and reduce the time and costs of managing software projects. Along the way they recount anecdotes from actual projects on which the relevant smell helped address a design issue. Contains a comprehensive catalog of 25 structural design smells (organized around four fundamental design principles) that contribute to technical debt in software projects Presents a unique naming scheme for smells that helps understand the cause of a smell as well as points toward its potential refactoring Includes illustrative examples that showcase the poor design practices underlying a smell and the problems that result Covers pragmatic techniques for refactoring design smells to manage technical debt and to create and maintain high-quality software in practice Presents insightful anecdotes and case studies drawn from the trenches of real-world projects

Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

Organizations today often struggle to balance business requirements with ever-increasing volumes of data. Additionally, the demand for leveraging large-scale, real-time data is growing rapidly among the most competitive digital industries. Conventional system architectures may not be up to the task. With this practical guide, you'll learn how to leverage large-scale data usage across the business units in your organization using the principles of event-driven microservices. Author Adam Belle-mare takes you through the process of building an event-driven microservice-powered organization. You'll reconsider how data is produced, accessed, and propagated across your organization. Learn powerful yet simple patterns for unlocking the value of this data. Incorporate event-driven design and architectural principles into your own systems. And completely rethink how your organization delivers value by unlocking near-real-time access to data at scale. You'll learn: How to leverage event-driven architectures to deliver exceptional business value The role of microservices in supporting event-driven designs Architectural patterns to ensure success both within and between teams in your organization Application patterns for developing powerful event-driven microservices Components and tooling required to get your microservice ecosystem off the ground

Describes Agile Modeling Driven Design (AMDD) and Test-Driven Design (TDD) approaches, database refactoring, database encapsulation strategies, and tools that support evolutionary techniques Agile software developers often use object and relational database (RDB) technology together and as a result must overcome the impedance mismatch The author covers techniques for mapping objects to RDBs and for implementing concurrency control, referential integrity, shared business logic, security access control, reports, and XML An agile foundation describes fundamental skills that all agile software developers require, particularly Agile DBAs Includes object modeling, UML data modeling, data normalization, class normalization, and how to deal with legacy databases Scott W. Ambler is author of Agile Modeling (0471202827), a contributing editor with Software Development (www.sdmagazine.com), and a featured speaker at software conferences worldwide

'NoSQL Distilled' is designed to provide you with enough background on how NoSQL databases work, so that you can choose the right data store without having to trawl the whole web to do it. It won't answer your questions definitively, but it should narrow down the range of options you have to consider.

This book constitutes the thoroughly refereed post-conference proceedings of the Second IFIP TC 2

Central and East Conference on Software Engineering Techniques, CEE-SET 2007, held in Poznan, Poland, in October 2007. The 21 revised full papers presented together with 2 keynote addresses were carefully reviewed and selected from 73 initial submissions. The papers are organized in topical sections on measurement, processes, UML, experiments, tools, and change.

"Hundreds of organizations around the world have already benefited from Disciplined Agile Delivery (DAD). Disciplined Agile (DA) is the only comprehensive tool kit available for guidance on building high-performance agile teams and optimizing your way of working (WoW). As a hybrid of all the leading agile and lean approaches, it provides hundreds of strategies to help you make better decisions within your agile teams, balancing self-organization with the realities and constraints of your unique enterprise context. The highlights of this handbook include: #1. As the official source of knowledge on DAD, it includes greatly improved and enhanced strategies with a revised set of goal diagrams based upon learnings from applying DAD in the field. #2 It is an essential handbook to help coaches and teams make better decisions in their daily work, providing a wealth of ideas for experimenting with agile and lean techniques while providing specific guidance and trade-offs for those "it depends" questions. #3 It makes a perfect study guide for Disciplined Agile certification. Why "fail fast" (as our industry likes to recommend) when you can learn quickly on your journey to high performance? With this handbook, you can make better decisions based upon proven, context-based strategies, leading to earlier success and better outcomes"--

This IBM® Redbooks® publication is focused on melding industry preferred practices with the unique needs of the IBM i community and providing a holistic view of modernization. This book covers key trends for application structure, user interface, data access, and the database. Modernization is a broad term when applied to applications. It is more than a single event. It is a sequence of actions. But even more, it is a process of rethinking how to approach the creation and maintenance of applications. There are tangible deliveries when it comes to modernization, the most notable being a modern user interface (UI), such as a web browser or being able to access applications from a mobile device. The UI, however, is only the beginning. There are many more aspects to modernization. Using modern tools and methodologies can significantly improve productivity and reduce long-term cost while positioning applications for the next decade. It is time to put the past away. Tools and methodologies have undergone significant transformation, improving functionality, usability, and productivity. This is true of the plethora of IBM tools and the wealth of tools available from many Independent Solution Providers (ISVs). This publication is the result of work that was done by IBM, industry experts, and by representatives from many of the ISV Tool Providers. Some of their tools are referenced in the book. In addition to reviewing technologies based on context, there is an explanation of why modernization is important and a description of the business benefits of investing in modernization. This critical information is key for line-of-business executives who want to understand the benefits of a modernization project. This book is appropriate for CIOs, architects, developers, and business leaders. Related information Making the Case for Modernization, IBM Systems Magazine

The first refactoring guide specifically for Ruby - one of today's fastest growing programming languages Co-authored by Martin Fowler based on his legendary Refactoring, which started the refactoring revolution.

How do you detangle a monolithic system and migrate it to a microservice architecture? How do you do it while maintaining business-as-usual? As a companion to Sam Newman's extremely popular Building Microservices, this new book details a proven method for transitioning an existing monolithic system to a microservice architecture. With many illustrative examples, insightful migration patterns, and a bevy of practical advice to transition your monolith enterprise into a microservice operation, this practical guide covers multiple scenarios and strategies for a successful migration, from initial planning all the way through application and database decomposition. You'll learn several tried and tested patterns and techniques that you can use as you migrate your existing architecture. Ideal for organizations looking to transition to microservices, rather than rebuild Helps companies determine whether to migrate, when to migrate, and where to begin Addresses communication, integration, and the migration of legacy systems Discusses multiple migration patterns and where they apply Provides database migration examples, along with synchronization strategies Explores application decomposition, including several architectural refactoring patterns Delves into details of database decomposition, including the impact of breaking referential and transactional integrity, new failure modes, and more

"This book takes the somewhat daunting process of database design and breaks it into completely manageable and understandable components. Mike's approach whilst simple is completely professional, and I can recommend this book to any novice database designer." --Sandra Barker, Lecturer, University of South Australia, Australia "Databases are a critical infrastructure technology for information systems and today's business. Mike Hernandez has written a literate explanation of database technology--a topic that is intricate and often obscure. If you design databases yourself, this book will educate you about pitfalls and show you what to do. If you purchase products that use a database, the book explains the technology so that you can understand what the vendor is doing and assess their products better." --Michael Blaha, consultant and trainer, author of A Manager's Guide to Database Technology "If you told me that Mike Hernandez could improve on the first edition of Database Design for Mere Mortals I wouldn't have believed you, but he did! The second edition is packed with more real-world examples, detailed explanations, and even includes database-design tools on the CD-ROM! This is a must-read for anyone who is even remotely interested in relational database design, from the individual who is called upon occasionally to create a useful tool at work, to the seasoned professional who wants to brush up on the fundamentals. Simply put, if you want to do it right, read this book!" --Matt Greer, Process Control Development, The Dow Chemical Company "Mike's approach to database design is totally common-sense based, yet he's adhered to all the rules of good relational database design. I use Mike's books in my starter database-design class, and I recommend his books to anyone who's interested in learning how to design databases or how to write SQL queries." --Michelle Poollet, President, MVDS, Inc. "Slapping together sophisticated applications with poorly designed data will hurt you just as much now as when Mike wrote his first edition, perhaps even more. Whether you're just getting started developing with data or are a seasoned pro; whether you've read Mike's previous book or this is your first; whether you're happier letting someone else design your data or you love doing it yourself--this is the book for you. Mike's ability to explain these concepts in a way that's not only clear, but fun, continues to amaze me." --From the Foreword by Ken Getz, MCW Technologies, coauthor ASP.NET Developer's JumpStart "The first edition of Mike Hernandez's book Database Design for Mere Mortals was one of the few books that survived the cut when I moved my office to smaller quarters. The second edition expands and improves on the original in so many ways. It is not only a good, clear read, but contains a remarkable quantity of clear, concise thinking on a very complex subject. It's a must for anyone interested in the subject of database design." --Malcolm C. Rubel, Performance Dynamics Associates "Mike's excellent guide to relational database design deserves a second edition. His book is an essential tool for fledgling Microsoft Access and other desktop database developers, as well as for client/server pros. I recommend it highly to all my readers." --Roger Jennings, author of Special Edition Using Access 2002 "There are no silver bullets! Database technology has advanced dramatically, the newest crop of database servers perform operations faster than anyone could have imagined six years ago, but none of these technological advances will help fix a bad database design, or capture data that you

forgot to include! Database Design for Mere Mortals(TM), Second Edition, helps you design your database right in the first place!" --Matt Nunn, Product Manager, SQL Server, Microsoft Corporation "When my brother started his professional career as a developer, I gave him Mike's book to help him understand database concepts and make real-world application of database technology. When I need a refresher on the finer points of database design, this is the book I pick up. I do not think that there is a better testimony to the value of a book than that it gets used. For this reason I have wholeheartedly recommended to my peers and students that they utilize this book in their day-to-day development tasks." --Chris Kunicki, Senior Consultant, OfficeZealot.com "Mike has always had an incredible knack for taking the most complex topics, breaking them down, and explaining them so that anyone can 'get it.' He has honed and polished his first very, very good edition and made it even better. If you're just starting out building database applications, this book is a must-read cover to cover. Expert designers will find Mike's approach fresh and enlightening and a source of great material for training others." --John Viescas, President, Viescas Consulting, Inc., author of Running Microsoft Access 2000 and coauthor of SQL Queries for Mere Mortals "Whether you need to learn about relational database design in general, design a relational database, understand relational database terminolo-

gy, or learn best practices for implementing a relational database, Database Design for Mere Mortals(TM), Second Edition, is an indispensable book that you'll refer to often. With his many years of real-world experience designing relational databases, Michael shows you how to analyze and improve existing databases, implement keys, define table relationships and business rules, and create data views, resulting in data integrity, uniform access to data, and reduced data-entry errors." --Paul Cornell, Site Editor, MSDN Office Developer Center Sound database design can save hours of development time and ensure functionality and reliability. Database Design for Mere Mortals(TM), Second Edition, is a straightforward, platform-independent tutorial on the basic principles of relational database design. It provides a commonsense design methodology for developing databases that work. Database design expert Michael J. Hernandez has expanded his best-selling first edition, maintaining its hands-on approach and accessibility while updating its coverage and including even more examples and illustrations. This edition features a CD-ROM that includes diagrams of sample databases, as well as design guidelines, documentation forms, and examples of the database design process. This book will give you the knowledge and tools you need to create efficient and effective relational databases.