

Data Model Patterns Pearsoncmg

This classic book is the definitive real-world style guide for better Smalltalk programming. This author presents a set of patterns that organize all the informal experience successful Smalltalk programmers have learned the hard way. When programmers understand these patterns, they can write much more effective code. The concept of Smalltalk patterns is introduced, and the book explains why they work. Next, the book introduces proven patterns for working with methods, messages, state, collections, classes and formatting. Finally, the book walks through a development example utilizing patterns. For programmers, project managers, teachers and students -- both new and experienced. This book presents a set of patterns that organize all the informal experience of successful Smalltalk programmers. This book will help you understand these patterns, and empower you to write more effective code.

To successfully deliver complex IT projects and derive the full business value they promise, IT professionals need a deep understanding of the information those projects will use and manage. Too often, however IT treats information as the 'poor stepchild' behind applications and infrastructure: a mere afterthought in project design and delivery. In this real-world practitioner's guide, a team of senior IBM architects show how to use information-centric views to dramatically improve project performance. You'll find proven patterns for simplifying and accelerating IT projects, deepening integration, and using information to drive more value from SOA and Business Process Management (BPM). Throughout, the authors explore real-world patterns of Common Information Management (CIM), characteristics and complexities of service oriented integration (SOI), and crucial linkages with

BPM. Previously, each of these paradigms has been understood and applied individually. Now, using actual customer examples and case studies, IBM's experts show how to achieve far better results by integrating them. Master alternative Big Data technologies that can do what Hadoop can't: real-time analytics and iterative machine learning. When most technical professionals think of Big Data analytics today, they think of Hadoop. But there are many cutting-edge applications that Hadoop isn't well suited for, especially real-time analytics and contexts requiring the use of iterative machine learning algorithms. Fortunately, several powerful new technologies have been developed specifically for use cases such as these. Big Data Analytics Beyond Hadoop is the first guide specifically designed to help you take the next steps beyond Hadoop. Dr. Vijay Srinivas Agneeswaran introduces the breakthrough Berkeley Data Analysis Stack (BDAS) in detail, including its motivation, design, architecture, Mesos cluster management, performance, and more. He presents realistic use cases and up-to-date example code for: Spark, the next generation in-memory computing technology from UC Berkeley Storm, the parallel real-time Big Data analytics technology from Twitter GraphLab, the next-generation graph processing paradigm from CMU and the University of Washington (with comparisons to alternatives such as Pregel and Piccolo) Halo also offers architectural and design guidance and code sketches for scaling machine learning algorithms to Big Data, and then realizing them in real-time. He concludes by previewing emerging trends, including real-time video analytics, SDNs, and even Big Data governance, security, and privacy issues. He identifies intriguing startups and new research possibilities, including BDAS extensions and cutting-edge model-driven analytics. Big Data Analytics Beyond Hadoop is an indispensable resource for everyone who wants

to reach the cutting edge of Big Data analytics, and stay there: practitioners, architects, programmers, data scientists, researchers, startup entrepreneurs, and advanced students. Sweet-talk Siri® for iOS 6 into doing practically anything! In iOS 6 and OS X Mountain Lion, Siri is more amazing than ever—and it's even better when you really know how to talk to it. Now, two top Apple® tech experts show how to talk the newest version of Siri into doing more than you ever thought possible! Look up what you want to do, and you'll find tested step-by-step instructions for getting perfect results—including new ways to do everything from checking football scores to posting on Facebook! Teach Siri to recognize requests and take dictation more accurately Check Yelp reviews and place OpenTable restaurant reservations Launch apps hands-free Find out where your friends are right now Choose a great movie with Rotten Tomatoes reviews Get up-to-the-minute player stats for baseball, football, or soccer Blog with Siri using email or text messaging Tweet updates, complete with location or appointment info Create location-based reminders that trigger at destinations like the drugstore Help Siri recognize and connect with your family and friends Transform Siri into your personal media DJ Find the nearest store that's selling whatever you want Answer math and science problems with Wolfram Alpha Make sure Siri responds only to you, not to an impostor Discover the silliness Apple engineered into Siri

This complete tutorial and reference assumes no previous knowledge of C, C++, objects, or patterns. Readers will walk through every core concept, one step at a time, learning through an extensive collection of Qt 4.1-tested examples and exercises.

In the era of "Big Data," effective information management has become crucial to the success of virtually all organizations. Unfortunately, few IT practitioners know

today's best practices for successfully managing enterprise information resources. "Patterns for Information Management" offers the solution: a multi-disciplinary patterns-based approach that reflects where information comes from, how it is distributed, protected, governed, monitored -- and, ultimately, utilized. Leading IBM information management experts Mandy Chessell and Harald Smith show how to design, integrate, and optimize "information supply chains" that:

- * Effectively characterize the information issues associated with today's complex distributed systems*
- Fully reflect today's service-oriented, message-based environments*
- Establish an information landscape that is effective, manageable, ordered, and efficient.*
- Create orderly flows of information which can be reused and synchronized wherever necessary*
- Support reasoned decision-making about the applicability and consequences of each alternative approach

Chessell and Smith complement their plain-English information pattern language with a complete case study demonstrating its real-world applications. Their pioneering guidebook will serve as both an indispensable guide to architects at all levels of experience "and" an outstanding long-term information management reference.

Data Model PatternsConventions of ThoughtAddison-Wesley

"The security of information systems has not improved at a rate consistent with the growth and sophistication of the attacks being made against them. To address this problem, we must improve the underlying strategies and techniques used to create our systems. Specifically, we must build security in from the start, rather than append it as an afterthought. That's the point of Secure Coding in C and C++. In careful detail, this book shows software developers how to build high-quality systems that are less vulnerable to costly and even catastrophic attack. It's a book that every developer should read before the start of any serious project." --Frank

Abagnale, author, lecturer, and leading consultant on fraud prevention and secure documents Learn the Root Causes of Software Vulnerabilities and How to Avoid Them Commonly exploited software vulnerabilities are usually caused by avoidable software defects. Having analyzed nearly 18,000 vulnerability reports over the past ten years, the CERT/Coordination Center (CERT/CC) has determined that a relatively small number of root causes account for most of them. This book identifies and explains these causes and shows the steps that can be taken to prevent exploitation. Moreover, this book encourages programmers to adopt security best practices and develop a security mindset that can help protect software from tomorrow's attacks, not just today's. Drawing on the CERT/CC's reports and conclusions, Robert Seacord systematically identifies the program errors most likely to lead to security breaches, shows how they can be exploited, reviews the potential consequences, and presents secure alternatives. Coverage includes technical detail on how to Improve the overall security of any C/C++ application Thwart buffer overflows and stack-smashing attacks that exploit insecure string manipulation logic Avoid vulnerabilities and security flaws resulting from the incorrect use of dynamic memory management functions Eliminate integer-related problems: integer overflows, sign errors, and truncation errors Correctly use formatted output functions without introducing format-string vulnerabilities Avoid I/O vulnerabilities, including race conditions Secure Coding in C and C++ presents hundreds of examples of secure code, insecure code, and exploits, implemented for Windows and Linux. If you're responsible for creating secure C or C++ software--or for keeping it safe--no other book offers you this much detailed, expert assistance.

The Most Complete, Practical, and Actionable Guide

to Microservices Going beyond mere theory and marketing hype, Eberhard Wolff presents all the knowledge you need to capture the full benefits of this emerging paradigm. He illuminates microservice concepts, architectures, and scenarios from a technology-neutral standpoint, and demonstrates how to implement them with today's leading technologies such as Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud. The author fully explains the benefits and tradeoffs associated with microservices, and guides you through the entire project lifecycle: development, testing, deployment, operations, and more. You'll find best practices for architecting microservice-based systems, individual microservices, and nanoservices, each illuminated with pragmatic examples. The author supplements opinions based on his experience with concise essays from other experts, enriching your understanding and illuminating areas where experts disagree. Readers are challenged to experiment on their own the concepts explained in the book to gain hands-on experience. Discover what microservices are, and how they differ from other forms of modularization Modernize legacy applications and efficiently build new systems Drive more value from continuous delivery with microservices Learn how microservices differ from SOA Optimize the microservices project lifecycle Plan, visualize, manage, and evolve architecture Integrate and

communicate among microservices Apply advanced architectural techniques, including CQRS and Event Sourcing Maximize resilience and stability Operate and monitor microservices in production Build a full implementation with Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud Explore nanoservices with Amazon Lambda, OSGi, Java EE, Vert.x, Erlang, and Seneca Understand microservices' impact on teams, technical leaders, product owners, and stakeholders Managers will discover better ways to support microservices, and learn how adopting the method affects the entire organization. Developers will master the technical skills and concepts they need to be effective. Architects will gain a deep understanding of key issues in creating or migrating toward microservices, and exactly what it will take to transform their plans into reality.

Logical Data Modeling offers business managers, analysts, and students a clear, basic systematic guide to defining business information structures in relational database terms. The approach, based on Clive Finkelstein's business-side Information Engineering, is hands-on, practical, and explicit in terminology and reasoning. Filled with illustrations, examples, and exercises, Logical Data Modeling makes its subject accessible to readers with only a limited knowledge of database systems. The book covers all essential topics thoroughly but succinctly:

entities, associations, attributes, keys and inheritance, valid and invalid structures, and normalization. It also emphasizes communication with business and database specialists, documentation, and the use of Visible Systems' Visible Advantage enterprise modeling tool. The application of design patterns to logical data modeling provides practitioners with a practical tool for fast development. At the end, a chapter covers the issues that arise when the logical data model is translated into the design for a physical database. Examines how teachers can make careful analyses of students' work to uncover error patterns and gain knowledge of a student's strengths on which to base future instruction.

Unlike any time before in our lives, we have access to vast amounts of free information. With the right tools, we can start to make sense of all this data to see patterns and trends that would otherwise be invisible to us. By transforming numbers into graphical shapes, we allow readers to understand the stories those numbers hide. In this practical introduction to understanding and using information graphics, you'll learn how to use data visualizations as tools to see beyond lists of numbers and variables and achieve new insights into the complex world around us. Regardless of the kind of data you're working with—business, science, politics, sports, or even your own personal finances—this

book will show you how to use statistical charts, maps, and explanation diagrams to spot the stories in the data and learn new things from it. You'll also get to peek into the creative process of some of the world's most talented designers and visual journalists, including Condé Nast Traveler's John Grimwade, National Geographic Magazine's Fernando Baptista, The New York Times' Steve Duenes, The Washington Post's Hannah Fairfield, Hans Rosling of the Gapminder Foundation, Stanford's Geoff McGhee, and European superstars Moritz Stefaner, Jan Willem Tulp, Stefanie Posavec, and Gregor Aisch. The book also includes a DVD-ROM containing over 90 minutes of video lessons that expand on core concepts explained within the book and includes even more inspirational information graphics from the world's leading designers. The first book to offer a broad, hands-on introduction to information graphics and visualization, *The Functional Art* reveals:

- Why data visualization should be thought of as “functional art” rather than fine art
- How to use color, type, and other graphic tools to make your information graphics more effective, not just better looking
- The science of how our brains perceive and remember information
- Best practices for creating interactive information graphics
- A comprehensive look at the creative process behind successful information graphics
- An extensive gallery of inspirational

work from the world's top designers and visual artists On the DVD-ROM: In this introductory video course on information graphics, Alberto Cairo goes into greater detail with even more visual examples of how to create effective information graphics that function as practical tools for aiding perception. You'll learn how to: incorporate basic design principles in your visualizations, create simple interfaces for interactive graphics, and choose the appropriate type of graphic forms for your data. Cairo also deconstructs successful information graphics from The New York Times and National Geographic magazine with sketches and images not shown in the book. All of Peachpit's eBooks contain the same content as the print edition. You will find a link in the last few pages of your eBook that directs you to the media files. Helpful tips: If you are able to search the book, search for "Where are the lesson files?" Go to the very last page of the book and scroll backwards. You will need a web-enabled device or computer in order to access the media files that accompany this ebook. Entering the URL supplied into a computer with web access will allow you to get to the files. Depending on your device, it is possible that your display settings will cut off part of the URL. To make sure this is not the case, try reducing your font size and turning your device to a landscape view. This should cause the full URL to appear. In this long-awaited book, Timothy J. Lensmire

examines the problems and promise of progressive literacy education. He does this by developing a series of striking metaphors in which, for example, he imagines the writing workshop as a carnival or popular festival and the teacher as a novelist who writes her student-characters into more and less desirable classroom stories. Grounded in Lensmire's own and others' work in schools, *Powerful Writing, Responsible Teaching* makes powerful use of Bakhtin's theories of language and writing and Dewey's vision of schooling and democracy. Lensmire's book is, at once, a defense, a criticism, and a reconstruction of progressive and critical literacy approaches.

For courses in web development and design. A Comprehensive, Well-Rounded Intro to Web Development and Design Updated and expanded in this Eighth Edition, *Web Development and Design Foundations with HTML5* presents a comprehensive introduction to the development of effective web sites. Intended for beginning web development courses, the text relates both the necessary hard skills (such as HTML5, CSS, and JavaScript) and soft skills (design, e-commerce, and promotion strategies) considered fundamental to contemporary web development. An emphasis on hands-on practice guides students, as the text introduces topics ranging from configuration and layout to accessibility techniques and ethical considerations.

The Eighth Edition contains updated coverage of HTML5 and CSS, expanded coverage of designing for mobile devices, and more.

The play-focused, step-by-step guide to creating great game designs This book offers a play-focused, process-oriented approach for designing games people will love to play. Drawing on a combined 35 years of design and teaching experience, Colleen Macklin and John Sharp link the concepts and elements of play to the practical tasks of game design. Using full-color examples, they reveal how real game designers think and work, and illuminate the amazing expressive potential of great game design. Focusing on practical details, this book guides you from idea to prototype to playtest and fully realized design. You'll walk through conceiving and creating a game's inner workings, including its core actions, themes, and especially its play experience. Step by step, you'll assemble every component of your "videogame," creating practically every kind of play: from cooperative to competitive, from chance-based to role-playing, and everything in between. Macklin and Sharp believe that games are for everyone, and game design is an exciting art form with a nearly unlimited array of styles, forms, and messages. Cutting across traditional platform and genre boundaries, they help you find inspiration wherever it exists. Games, Design and Play is for all game design students, and for beginning-to-

intermediate-level game professionals, especially independent game designers. Bridging the gaps between imagination and production, it will help you craft outstanding designs for incredible play experiences! Coverage includes: Understanding core elements of play design: actions, goals, rules, objects, playspace, and players Mastering “tools” such as constraint, interaction, goals, challenges, strategy, chance, decision, storytelling, and context Comparing types of play and player experiences Considering the demands videogames make on players Establishing a game’s design values Creating design documents, schematics, and tracking spreadsheets Collaborating in teams on a shared design vision Brainstorming and conceptualizing designs Using prototypes to realize and playtest designs Improving designs by making the most of playtesting feedback Knowing when a design is ready for production Learning the rules so you can break them!

2012 Jolt Award Finalist! Even experienced software professionals find it difficult to apply patterns in ways that deliver substantial value to their organizations. In *Elemental Design Patterns*, Jason McC. Smith addresses this problem head-on, helping developers harness the true power of patterns, map them to real software implementations more cleanly and directly, and achieve far better results. Part tutorial, part example-rich cookbook, this resource will help

developers, designers, architects, and analysts successfully use patterns with a wide variety of languages, environments, and problem domains. Every bit as important, it will give them a deeper appreciation for the work they've chosen to pursue. Smith presents the crucial missing link that patterns practitioners have needed: a foundational collection of simple core patterns that are broken down to their core elements. If you work in software, you may already be using some of these elemental design patterns every day. Presenting them in a comprehensive methodology for the first time, Smith names them, describes them, explains their importance, helps you compare and choose among them, and offers a framework for using them together. He also introduces an innovative Pattern Instance Notation diagramming system that makes it easier to work with patterns at many levels of granularity, regardless of your goals or role. If you're new to patterns, this example-rich approach will help you master them piece by piece, logically and intuitively. If you're an experienced patterns practitioner, Smith follows the Gang of Four format you're already familiar with, explains how his elemental patterns can be composed into conventional design patterns, and introduces highly productive new ways to apply ideas you've already encountered. No matter what your level of experience, this infinitely practical book will help you

transform abstract patterns into high-value solutions. This is the digital version of the printed book (Copyright © 1996). Learning the basics of a modeling technique is not the same as learning how to use and apply it. To develop a data model of an organization is to gain insights into its nature that do not come easily. Indeed, analysts are often expected to understand subtleties of an organization's structure that may have evaded people who have worked there for years. Here's help for those analysts who have learned the basics of data modeling (or "entity/relationship modeling") but who need to obtain the insights required to prepare a good model of a real business. Structures common to many types of business are analyzed in areas such as accounting, material requirements planning, process manufacturing, contracts, laboratories, and documents. In each chapter, high-level data models are drawn from the following business areas: The Enterprise and Its World The Things of the Enterprise Procedures and Activities Contracts Accounting The Laboratory Material Requirements Planning Process Manufacturing Documents Lower-Level Conventions Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. The authors

also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book.

This comprehensive and authoritative guide will teach you the DAX language for business intelligence, data modeling, and analytics. Leading Microsoft BI consultants Marco Russo and Alberto Ferrari help you master everything from table functions through advanced code and model optimization. You'll learn exactly what happens under the hood when you run a DAX expression,

how DAX behaves differently from other languages, and how to use this knowledge to write fast, robust code. If you want to leverage all of DAX's remarkable power and flexibility, this no-compromise "deep dive" is exactly what you need. Perform powerful data analysis with DAX for Microsoft SQL Server Analysis Services, Excel, and Power BI Master core DAX concepts, including calculated columns, measures, and error handling Understand evaluation contexts and the CALCULATE and CALCULATETABLE functions Perform time-based calculations: YTD, MTD, previous year, working days, and more Work with expanded tables, complex functions, and elaborate DAX expressions Perform calculations over hierarchies, including parent/child hierarchies Use DAX to express diverse and unusual relationships Measure DAX query performance with SQL Server Profiler and DAX Studio

Learn proven, real-world techniques for specifying software requirements with this practical reference. It details 30 requirement "patterns" offering realistic examples for situation-specific guidance for building effective software requirements. Each pattern explains what a requirement needs to convey, offers potential questions to ask, points out potential pitfalls, suggests extra requirements, and other advice. This book also provides guidance on how to write other kinds of information that belong in a requirements specification, such as assumptions, a

glossary, and document history and references, and how to structure a requirements specification. A disturbing proportion of computer systems are judged to be inadequate; many are not even delivered; more are late or over budget. Studies consistently show one of the single biggest causes is poorly defined requirements: not properly defining what a system is for and what it's supposed to do. Even a modest contribution to improving requirements offers the prospect of saving businesses part of a large sum of wasted investment. This guide emphasizes this important requirement need—determining what a software system needs to do before spending time on development. Expertly written, this book details solutions that have worked in the past, with guidance for modifying patterns to fit individual needs—giving developers the valuable advice they need for building effective software requirements

Indispensable Patterns and Insights for Putting Mashups to Work in Enterprise Environments Using new mashup tools and technologies, enterprise developers can impose their own APIs on everything from Web sites and RSS feeds to Excel and PDF files—transforming a world of content into their own customized information source. In *Mashup Patterns*, Michael Ogrinz applies the concept of software development patterns to mashups, systematically revealing the right ways to build enterprise mashups

and providing useful insights to help organizations avoid the mistakes that cause mashups to fail. Drawing on extensive experience building business-critical mashups, Ogrinz offers patterns and realistic guidance for every stage of the mashup development lifecycle and addresses the key issues developers, architects, and managers will face. Each pattern is documented with a practical description, specific use cases, and crucial insights into the stability of mashups built with it. Ogrinz concludes by presenting twelve start-to-finish case studies demonstrating mashup patterns at work in actual enterprise settings. Coverage includes:

- Understanding the relationships among mashups, portals, SOA, EAI/EII, and SaaS
- Exploring core mashup activities such as data management, surveillance, clipping, transformation, enrichment, publication, and promotion
- Optimizing security, privacy, accessibility, usability, and performance
- Managing mashup development, from planning and governance through integration, testing, and deployment
- Enhancing basic mashups with search, language translation, workflow support, and other improvements
- Performing effective load and regression testing
- Avoiding “anti-patterns” that cause enterprise mashups to fail

Also of interest: The companion book, *Mashups: Strategies for the Modern Enterprise* by J. Jeffrey Hanson (Addison-Wesley), is an indispensable guide to designing,

implementing, and debugging an enterprise mashup, offering sample code to illustrate key concepts.

Battle-Tested Strategies for Storing, Managing, and Sharing Android Data “Android™ Database Best Practices goes well beyond API documentation to offer strategic advice about how to handle data in an Android application and the tools needed to develop productively. This arms the developer with a trove of solutions to nearly any problem an application may face involving data. Mastering the concepts in this book are therefore essential for any developer who wants to create professional Android applications.”

—Greg Milette, Android developer, Gradison Technologies, Inc. This is the first guide to focus on one of the most critical aspects of Android development: how to efficiently store, retrieve, manage, and share information from your app’s internal database. Through real-world code examples, which you can use in your own apps, you’ll learn how to take full advantage of SQLite and the database-related classes on Android. A part of Addison-Wesley’s Android™ Deep Dive series for experienced Android developers, Android Database Best Practices draws on Adam Stroud’s extensive experience leading cutting-edge app projects. Stroud reviews the core database theory and SQL techniques you need to efficiently build, manipulate, and read SQLite databases. He explores SQLite in detail, illuminates Android’s APIs for database

interaction, and shares modern best practices for working with databases in the Android environment. Through a complete case study, you'll learn how to design your data access layer to simplify all facets of data management and avoid unwanted technical debt. You'll also find detailed solutions for common challenges in building data-enabled Android apps, including issues associated with threading, remote data access, and showing data to users. Extensive, up-to-date sample code is available for download at github.com/android-database-best-practices/device-database. You will Discover how SQLite database differs from other relational databases Use SQL DDL to add structure to a database, and use DML to manipulate data Define and work with SQLite data types Persist highly structured data for fast, efficient access Master Android classes for create, read, update, and delete (CRUD) operations and database queries Share data within or between apps via content providers Master efficient UI strategies for displaying data, while accounting for threading issues Use Android's Intents API to pass data between activities when starting a new activity or service Achieve two-way communication between apps and remote web APIs Manage the complexities of app-to-server communication, and avoid common problems Use Android's new Data Binding API to write less code and improve performance In cooperation with experts and practitioners

throughout the SOA community, best-selling author Thomas Erl brings together the de facto catalog of design patterns for SOA and service-orientation. More than three years in development and subjected to numerous industry reviews, the 85 patterns in this full-color book provide the most successful and proven design techniques to overcoming the most common and critical problems to achieving modern-day SOA. Through numerous examples, individually documented pattern profiles, and over 400 color illustrations, this book provides in-depth coverage of:

- Patterns for the design, implementation, and governance of service inventories—collections of services representing individual service portfolios that can be independently modeled, designed, and evolved.
- Patterns specific to service-level architecture which pertain to a wide range of design areas, including contract design, security, legacy encapsulation, reliability, scalability, and a variety of implementation and governance issues.
- Service composition patterns that address the many aspects associated with combining services into aggregate distributed solutions, including topics such as runtime messaging and message design, inter-service security controls, and transformation.
- Compound patterns (such as Enterprise Service Bus and Orchestration) and recommended pattern application sequences that establish foundational processes. The book begins by establishing SOA

types that are referenced throughout the patterns and then form the basis of a final chapter that discusses the architectural impact of service-oriented computing in general. These chapters bookend the pattern catalog to provide a clear link between SOA design patterns, the strategic goals of service-oriented computing, different SOA types, and the service-orientation design paradigm. This book series is further supported by a series of resources sites, including soabooks.com, soaspecs.com, soapatterns.org, soamag.com, and soaposters.com. 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 and updated, this book shares the knowledge and real-world 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 Capture the benefits of prioritizing software maintainability See how

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.

The old Internet typically connected personal computers. But a radically new Internet is emerging. Some call it an "Internet of Things" (IoT) or "Internet of Everything" (IoE). The IoT won't just connect people: it'll connect "smart" homes, appliances, cars, aircraft (a.k.a. drones)... offices, factories, cities... the world. By some estimates, the IoE will explode into a \$19 trillion market in just a few years. If that happens... when that happens... it will transform your life. ¿ You need to know what's coming. But, until now, most guides to the Internet of Everything have been written for technical experts. Now, the world's #1 author of beginning technology books has written the perfect introduction for every consumer and citizen. In *The Internet of Things*, Michael Miller reveals how a new generation of autonomously connected smart devices is emerging, and how it will enable people and devices to do more things, more intelligently, and more rapidly. ¿ Miller demystifies every type of smart device, both current and future. Each chapter ends with a special "...and You" section, offering up-to-the-minute advice for using today's IoE technologies or preparing for tomorrow's. ¿ You'll also discover the potential downsides and risks associated with intelligent,

automatic interaction. When all your devices can communicate with each other (and with the companies that sell and monitor them), how private is your private life? Do the benefits outweigh the risks? And what does a connected world do when the connections suddenly go down? Packed with scenarios and insider interviews, *The Internet of Things* makes our future utterly, vividly real.

"International Institute for Analytics"--Dust jacket.

Get the end-to-end instruction you need to design, develop, and deploy more effective data integration, reporting, and analysis solutions using SQL Server 2008—whether you're new to business intelligence (BI) programming or a seasoned pro. With real-world examples and insights from an expert team, you'll master the concepts, tools, and techniques for building solutions that deliver intelligence—and business value—exactly where users want it. Discover how to:

- Manage the development life cycle and build a BI team
- Dig into SQL Server Analysis Services, Integration Services, and Reporting Services
- Navigate the Business Intelligence Development Studio (BIDS)
- Write queries that rank, sort, and drill down on sales data
- Develop extract, transform, and load (ETL) solutions
- Add a source code control system
- Help secure packages for deployment via encryption and credentials
- Use MDX and DMX Query Designers to build reports based on OLAP cubes and data mining models
- Create and implement custom objects using .NET code
- View reports in Microsoft Office Excel and Office SharePoint Server

ook "A very rich book sprinkled with real-life examples as well as battle-tested advice." —Pierre Haren, VP ILOG,

IBM "James does a thorough job of explaining Decision Management Systems as enablers of a formidable business transformation." —Deepak Advani, Vice President, Business Analytics Products and SPSS, IBM

Build Systems That Work Actively to Help You Maximize Growth and Profits

Most companies rely on operational systems that are largely passive. But what if you could make your systems active participants in optimizing your business? What if your systems could act intelligently on their own? Learn, not just report? Empower users to take action instead of simply escalating their problems? Evolve without massive IT investments? Decision Management Systems can do all that and more. In this book, the field's leading expert demonstrates how to use them to drive unprecedented levels of business value. James Taylor shows how to integrate operational and analytic technologies to create systems that are more agile, more analytic, and more adaptive. Through actual case studies, you'll learn how to combine technologies such as predictive analytics, optimization, and business rules—improving customer service, reducing fraud, managing risk, increasing agility, and driving growth. Both a practical how-to guide and a framework for planning, *Decision Management Systems* focuses on mainstream business challenges. Coverage includes

- Understanding how Decision Management Systems can transform your business
- Planning your systems "with the decision in mind"
- Identifying, modeling, and prioritizing the decisions you need to optimize
- Designing and implementing robust decision services
- Monitoring your ongoing decision-making and learning how to improve it

Proven enablers of effective Decision Management Systems: people, process, and technology Identifying and overcoming obstacles that can derail your Decision Management Systems initiative

Publisher Fact Sheet A concise, hands-on approach to managing & improving the critical requirements process in software development.

How to Transform Your Organization with Analytics:

Insider Lessons from IBM's Pioneering Experience

Analytics is not just a technology: It is a better way to do business. Using analytics, you can systematically inform human judgment with data-driven insight. This doesn't just improve decision-making: It also enables greater innovation and creativity in support of strategy. Your transformation won't happen overnight; however, it is absolutely achievable, and the rewards are immense.

This book demystifies your analytics journey by showing you how IBM has successfully leveraged analytics across the enterprise, worldwide. Three of IBM's pioneering analytics practitioners share invaluable real-world perspectives on what does and doesn't work and how you can start or accelerate your own transformation. This book provides an essential framework for becoming a smarter enterprise and shows through 31 case studies how IBM has derived value from analytics throughout its business. Coverage Includes Creating a smarter workforce through big data and analytics More effectively optimizing supply chain processes Systematically improving financial forecasting Managing financial risk, increasing operational efficiency, and creating business value Reaching more B2B or B2C customers and

deepening their engagement Optimizing manufacturing and product management processes Deploying your sales organization to increase revenue and effectiveness Achieving new levels of excellence in services delivery and reducing risk Transforming IT to enable wider use of analytics “Measuring the immeasurable” and filling gaps in imperfect data Whatever your industry or role, whether a current or future leader, analytics can make you smarter and more competitive. Analytics Across the Enterprise shows how IBM did it--and how you can, too. Learn more about IBM Analytics

Need to overcome information overload and get your message across? Infographics are your secret weapon. Using them, you can deliver knowledge and ideas visually, so your audiences can understand them quickly - and take action. In *The Power of Infographics*, Mark Smiciklas helps you understand how to leverage the use of powerful infographics: visual representations capable of transforming complex data or concepts into intuitive, instant knowledge. Writing from a business perspective, Smiciklas reveals how to use infographics both inside and outside the organization: to build brands, make sales, serve clients, align teams behind new strategies, and more. This straightforward, visual, common-sense based book explains:

- * What infographics are, and why they work so well
- * How to visualize statistical data, business processes, time, geography, lists, relationships, and concepts
- * How to communicate the "personal" through infographics
- * Best practices for observation, processing ideas, creating highly effective infographics, and publishing them
- * How to plan for and measure the

ROI of infographics * And much more...

Master C++ “The Qt Way” with Modern Design Patterns and Efficient Reuse This fully updated, classroom-tested book teaches C++ “The Qt Way,” emphasizing design patterns and efficient reuse. Readers will master both the C++ language and Qt libraries, as they learn to develop maintainable software with well-defined code layers and simple, reusable classes and functions. Every chapter of this edition has been improved with new content, better organization, or both. Readers will find extensively revised coverage of QObjects, Reflection, Widgets, Main Windows, Models and Views, Databases, Multi-Threaded Programming, and Reflection. This edition introduces the powerful new Qt Creator IDE; presents new multimedia APIs; and offers extended coverage of Qt Designer and C++ Integration. It has been restructured to help readers start writing software immediately and write robust, effective software sooner. The authors introduce several new design patterns, add many quiz questions and labs, and present more efficient solutions relying on new Qt features and best practices. They also provide an up-to-date C++ reference section and a complete application case study. Master C++ keywords, literals, identifiers, declarations, types, and type conversions. Understand classes and objects, organize them, and describe their interrelationships. Learn consistent programming style and naming rules. Use lists, functions, and other essential techniques. Define inheritance relationships to share code and promote reuse. Learn how code libraries are designed, built, and reused. Work with QObject, the base class

underlying much of Qt. Build graphical user interfaces with Qt widgets. Use templates to write generic functions and classes. Master advanced reflective programming techniques. Use the Model-View framework to cleanly separate data and GUI classes. Validate input using regular expressions and other techniques. Parse XML data with SAX, DOM, and QDomStreamReader. Master today's most valuable creational and structural design patterns. Create, use, monitor, and debug processes and threads. Access databases with Qt's SQL classes. Manage memory reliably and efficiently. Understand how to effectively manage QThreads and use QtConcurrent algorithms. [Click here to obtain supplementary materials for this book.](#)

The revised edition of the classic Core Java™, Volume II—Advanced Features, covers advanced user-interface programming and the enterprise features of the Java SE 6 platform. Like Volume I (which covers the core language and library features), this volume has been updated for Java SE 6 and new coverage is highlighted throughout. All sample programs have been carefully crafted to illustrate the latest programming techniques, displaying best-practices solutions to the types of real-world problems professional developers encounter. Volume II includes new sections on the StAX API, JDBC 4, compiler API, scripting framework, splash screen and tray APIs, and many other Java SE 6 enhancements. In this book, the authors focus on the more advanced features of the Java language, including complete coverage of Streams and Files Networking Database programming XML JNDI and LDAP Internationalization Advanced GUI components Java 2D and advanced AWT JavaBeans Security RMI and Web services Collections Annotations

Native methods For thorough coverage of Java fundamentals—including interfaces and inner classes, GUI programming with Swing, exception handling, generics, collections, and concurrency—look for the eighth edition of Core Java™, Volume I—Fundamentals (ISBN: 978-0-13-235476-9).

Master Data Analytics Hands-On by Solving Fascinating Problems You'll Actually Enjoy! Harvard Business Review recently called data science “The Sexiest Job of the 21st Century.” It’s not just sexy: For millions of managers, analysts, and students who need to solve real business problems, it’s indispensable. Unfortunately, there’s been nothing easy about learning data science—until now. Getting Started with Data Science takes its inspiration from worldwide best-sellers like Freakonomics and Malcolm Gladwell’s Outliers: It teaches through a powerful narrative packed with unforgettable stories. Murtaza Haider offers informative, jargon-free coverage of basic theory and technique, backed with plenty of vivid examples and hands-on practice opportunities. Everything’s software and platform agnostic, so you can learn data science whether you work with R, Stata, SPSS, or SAS. Best of all, Haider teaches a crucial skillset most data science books ignore: how to tell powerful stories using graphics and tables. Every chapter is built around real research challenges, so you’ll always know why you’re doing what you’re doing. You’ll master data science by answering fascinating questions, such as:

- Are religious individuals more or less likely to have extramarital affairs?
- Do attractive professors get better teaching evaluations?
- Does the higher price of cigarettes deter smoking?
- What determines housing prices more: lot size or the number of bedrooms?
- How do teenagers and older people differ in the way they use social media?
- Who is more likely to use online dating services?
- Why do some purchase iPhones and

others Blackberry devices? • Does the presence of children influence a family's spending on alcohol? For each problem, you'll walk through defining your question and the answers you'll need; exploring how others have approached similar challenges; selecting your data and methods; generating your statistics; organizing your report; and telling your story.

Throughout, the focus is squarely on what matters most: transforming data into insights that are clear, accurate, and can be acted upon.

Since 2001, the CERT® Insider Threat Center at Carnegie Mellon University's Software Engineering Institute (SEI) has collected and analyzed information about more than seven hundred insider cyber crimes, ranging from national security espionage to theft of trade secrets. The CERT® Guide to Insider Threats describes CERT's findings in practical terms, offering specific guidance and countermeasures that can be immediately applied by executives, managers, security officers, and operational staff within any private, government, or military organization. The authors systematically address attacks by all types of malicious insiders, including current and former employees, contractors, business partners, outsourcers, and even cloud-computing vendors. They cover all major types of insider cyber crime: IT sabotage, intellectual property theft, and fraud. For each, they present a crime profile describing how the crime tends to evolve over time, as well as motivations, attack methods, organizational issues, and precursor warnings that could have helped the organization prevent the incident or detect it earlier. Beyond identifying crucial patterns of suspicious behavior, the authors present concrete defensive measures for protecting both systems and data. This book also conveys the big picture of the insider threat problem over time: the complex interactions and unintended consequences of existing policies, practices, technology, insider mindsets, and organizational culture. Most

important, it offers actionable recommendations for the entire organization, from executive management and board members to IT, data owners, HR, and legal departments. With this book, you will find out how to Identify hidden signs of insider IT sabotage, theft of sensitive information, and fraud Recognize insider threats throughout the software development life cycle Use advanced threat controls to resist attacks by both technical and nontechnical insiders Increase the effectiveness of existing technical security tools by enhancing rules, configurations, and associated business processes Prepare for unusual insider attacks, including attacks linked to organized crime or the Internet underground By implementing this book's security practices, you will be incorporating protection mechanisms designed to resist the vast majority of malicious insider attacks.

Augmented reality (AR) is one of today's most fascinating and future-oriented areas of computer science and technology. By overlaying computer-generated information on views of the real world, AR amplifies human perception and cognition in remarkable new ways. Do you like the virtual first-down line in football games on TV? That's AR. And AR apps are rapidly coming to billions of smartphones, too. Working in AR requires knowledge from diverse disciplines, including computer vision, computer graphics, and human-computer interaction (HCI). *Augmented Reality: Principles and Practice* integrates all this knowledge into a single-source reference, presenting the most significant AR work with scrupulous accuracy. Dieter Schmalstieg, a pioneer of both AR foundation and application, is drawing from his two decades of AR experience to clearly present the field. Together with mobile AR pioneer and research colleague Tobias Höllerer, the authors address all aspects of the field, illuminating AR from both technical and HCI perspectives. The authors review AR's technical foundations, including display and tracking

technologies, show how AR emerges from the symbiosis of computer vision and computer graphics, introduce AR-specific visualization and 3D interaction techniques, and showcase applications from diverse industries. They conclude with an outlook on trends and emerging technologies, including practical pointers for beginning practitioners. This book is an indispensable resource for everyone interested in AR, including software and app developers, engineers, students and instructors, researchers, and hobbyists. For use in educational environments, the authors will provide a companion website containing slides, code examples, and other source materials.

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 repeatably than ever before.

This is the eagerly-anticipated revision to one of the seminal books in the field of software architecture which clearly defines and explains the topic.

Banish math anxiety and give students of all ages a clear roadmap to success Mathematical Mindsets provides

practical strategies and activities to help teachers and parents show all children, even those who are convinced that they are bad at math, that they can enjoy and succeed in math. Jo Boaler—Stanford researcher, professor of math education, and expert on math learning—has studied why students don't like math and often fail in math classes. She's followed thousands of students through middle and high schools to study how they learn and to find the most effective ways to unleash the math potential in all students. There is a clear gap between what research has shown to work in teaching math and what happens in schools and at home. This book bridges that gap by turning research findings into practical activities and advice. Boaler translates Carol Dweck's concept of 'mindset' into math teaching and parenting strategies, showing how students can go from self-doubt to strong self-confidence, which is so important to math learning. Boaler reveals the steps that must be taken by schools and parents to improve math education for all. Mathematical Mindsets: Explains how the brain processes mathematics learning Reveals how to turn mistakes and struggles into valuable learning experiences Provides examples of rich mathematical activities to replace rote learning Explains ways to give students a positive math mindset Gives examples of how assessment and grading policies need to change to support real understanding Scores of students hate and fear math, so they end up leaving school without an understanding of basic mathematical concepts. Their evasion and departure hinders math-related pathways and STEM career opportunities. Research has shown very clear methods to change this phenomena, but the information has been confined to research journals—until now. Mathematical Mindsets provides a proven, practical roadmap to mathematics success for any student at any age.

The goal of this book is to introduce a reader to a new

philosophy of teaching and learning physics - Investigative Science Learning Environment, or ISLE (pronounced as a small island). ISLE is an example of an "intentional" approach to curriculum design and learning activities (MacMillan and Garrison 1988 A Logical Theory of Teaching: Erotetics and Intentionality). Intentionality means that the process through which the learning occurs is as crucial for learning as the final outcome or learned content. In ISLE, the process through which students learn mirrors the practice of physics.

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