

Data Warehouse Toolkit Practical Techniques For Building Dimensional Data Warehouses

The barriers to entry in your market just vanished. Unexpected competitors are swarming in. Are you ready? You always knew digital was going to change things, but you didn't realize how close to home it would hit. In every industry, digital competitors are taking advantage of new platforms, tools, and relationships to undercut competitors, get closer to customers, and disrupt the usual ways of doing business. The only way to compete is to evolve. James McQuivey of Forrester Research has been teaching people how to do this for over a decade. He's gone into the biggest companies, even in traditional industries like insurance and consumer packaged goods, and changed the way they think about innovation. Now he's sharing his approach with you. McQuivey will show you how Dr. Hugh Reinhoff of Ferrokin BioSciences disrupted the pharmaceutical industry, streamlining connections with doctors and regulators to bring molecules to market far faster--and then sold out for \$100 million. How Charles Teague and his team of four people created Lose It!, a weight loss application that millions have adopted, achieving rapid success and undermining titans like Weight Watchers and Jenny Craig in the process. Regardless of your background and industry, you can learn how to be a digital disruptor too. First, adopt the right mindset: Take risks, invest as cheaply as possible, and build on existing platforms to find the fastest path to solving a customer's problem. Second, seek the "adjacent possible"--the space just next to yours where new technology creates opportunity. That's how Benjamin Rubin and Paolo DePetrillo of Zeo created a \$100 sleep monitor that does much of what you'd get from a \$3,000 sleep lab visit. Finally, disrupt yourself. Use these tools to make parts of your business obsolete before your competitors do. That's what Tim FitzRandolph did at Disney, creating a game that shot to the top of the app store charts. With the tools in this book you can assess your readiness, learn the disruptive mindset, and innovate rapidly, starting right within your own business.

Managing Data in Motion describes techniques that have been developed for significantly reducing the complexity of managing system interfaces and enabling scalable architectures. Author April Reeve brings over two decades of experience to present a vendor-neutral approach to moving data between computing environments and systems. Readers will learn the techniques, technologies, and best practices for managing the passage of data between computer systems and integrating disparate data together in an enterprise environment. The average enterprise's computing environment is comprised of hundreds to thousands computer systems that have been built, purchased, and acquired over time. The data from these various systems needs to be integrated for reporting and analysis, shared for business

transaction processing, and converted from one format to another when old systems are replaced and new systems are acquired. The management of the "data in motion" in organizations is rapidly becoming one of the biggest concerns for business and IT management. Data warehousing and conversion, real-time data integration, and cloud and "big data" applications are just a few of the challenges facing organizations and businesses today. Managing Data in Motion tackles these and other topics in a style easily understood by business and IT managers as well as programmers and architects. Presents a vendor-neutral overview of the different technologies and techniques for moving data between computer systems including the emerging solutions for unstructured as well as structured data types Explains, in non-technical terms, the architecture and components required to perform data integration Describes how to reduce the complexity of managing system interfaces and enable a scalable data architecture that can handle the dimensions of "Big Data" Master the most agile and resilient design for building analytics applications: the Unified Star Schema (USS) approach. The USS has many benefits over traditional dimensional modeling. Witness the power of the USS as a single star schema that serves as a foundation for all present and future business requirements of your organization. Data warehouse legend Bill Inmon and business intelligence innovator, Francesco Puppini, explain step-by-step why the Unified Star Schema is the recommended approach for business intelligence designs today, and show through many examples how to build and use this new solution. This book contains two parts. Part I, Architecture, explains the benefits of data marts and data warehouses, covering how organizations progressed to their current state of analytics, and to the challenges that result from current business intelligence architectures. Chapter 1 covers the drivers behind and the characteristics of the data warehouse and data mart. Chapter 2 introduces dimensional modeling concepts, including fact tables, dimensions, star joins, and snowflakes. Chapter 3 recalls the evolution of the data mart. Chapter 4 explains Extract, Transform, and Load (ETL), and the value ETL brings to reporting. Chapter 5 explores the Integrated Data Mart Approach, and Chapter 6 explains how to monitor this environment. Chapter 7 describes the different types of metadata within the data warehouse environment. Chapter 8 progresses through the evolution to our current modern data warehouse environment. Part II, the Unified Star Schema, covers the Unified Star Schema (USS) approach and how it solves the challenges introduced in Part I. There are eight chapters within Part II: - Chapter 9, Introduction to the Unified Star Schema: Learn about its architecture and use cases, as well as how the USS approach differs from the traditional approach. - Chapter 10, Loss of Data: Learn about the loss of data and the USS Bridge. Understand that the USS approach does not create any join, and for this reason, it has no loss of data. - Chapter 11, The Fan Trap: Get introduced to the Oriented Data Model convention, and learn the dangers of a fan trap through an example. Differentiate join and association, and realize that an "in-memory association" is the preferred solution to the fan trap. - Chapter 12, The

Chasm Trap: Become familiar with the Cartesian product, and then follow along with an example based on LinkedIn, which illustrates that a chasm trap produces unwanted duplicates. See that the USS Bridge is based on a union, which does not create any duplicates. · Chapter 13, Multi-Fact Queries: Distinguish between multiple facts “with direct connection” versus multiple facts “with no direct connection”. Explore how BI tools are capable of building aggregated virtual rows. · Chapter 14, Loops: Learn more about loops and five traditional techniques to solve them. Follow along with an implementation, which will illustrate the solution based on the USS approach. · Chapter 15, Non-Conformed Granularities: Learn about non-conformed granularities, and learn that the Unified Star Schema introduces a solution called “re-normalization”. · Chapter 16, Northwind Case Study. Witness how easy it is to detect the pitfalls of Northwind using the ODM convention. Follow along with an implementation of the USS approach on the Northwind database with various BI tools.

This book offers a thorough grounding in machine learning concepts combined with practical advice on applying machine learning tools and techniques in real-world data mining situations. Clearly written and effectively illustrated, this book is ideal for anyone involved at any level in the work of extracting usable knowledge from large collections of data.

Complementing the book's instruction is fully functional machine learning software.

The Data Warehouse ETL Toolkit Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data John Wiley & Sons

An unparalleled collection of recommended guidelines for data warehousing and business intelligence pioneered by Ralph Kimball and his team of colleagues from the Kimball Group. Recognized and respected throughout the world as the most influential leaders in the data warehousing industry, Ralph Kimball and the Kimball Group have written articles covering more than 250 topics that define the field of data warehousing. For the first time, the Kimball Group's incomparable advice, design tips, and best practices have been gathered in this remarkable collection of articles, which spans a decade of data warehousing innovation. Each group of articles is introduced with original commentaries that explain their role in the overall lifecycle methodology developed by the Kimball Group. These practical, hands-on articles are fully updated to reflect current practices and terminology and cover the complete lifecycle—including project planning, requirements gathering, dimensional modeling, ETL, and business intelligence and analytics. This easily referenced collection is nothing less than vital if you are involved with data warehousing or business intelligence in any capacity. Describes data warehousing design and development techniques using MySQL.

After her "stand-in mother," a bold black woman named Rosaleen, insults the three biggest racists in town, Lily Owens joins Rosaleen on a journey to Tiburon, South Carolina, where they are taken in by three black, bee-keeping sisters.

The "father of data warehousing" incorporates the latest technologies into his blueprint for integrated decision support systems. Today's corporate IT and data warehouse managers are required to make a small army of technologies work together to ensure fast and accurate information for business managers. Bill Inmon created the Corporate Information Factory to solve the needs of these managers. Since the First Edition, the design of the factory has grown and changed dramatically. This Second Edition, revised and expanded by 40% with five new chapters, incorporates these changes. This step-by-step guide will enable readers to connect their legacy systems with the data warehouse and deal with a host of new and changing technologies, including Web access mechanisms, e-commerce systems, ERP (Enterprise Resource Planning) systems. The book also looks closely at exploration and data mining servers for analyzing customer behavior and departmental data marts for finance, sales, and marketing.

"This book provides a comprehensive compilation of knowledge covering state-of-the-art developments and research, as well as current innovative activities in data warehousing and mining, focusing on the integration between the fields of data warehousing and data mining, with emphasis on the applicability to real world problems"--Provided by publisher.

Building upon his earlier book that detailed agile data warehousing programming techniques for the Scrum master, Ralph's latest work illustrates the agile interpretations of the remaining software engineering disciplines: Requirements management benefits from streamlined templates that not only define projects quickly, but ensure nothing essential is overlooked. Data engineering receives two new "hyper modeling" techniques, yielding data warehouses that can be easily adapted when requirements change without having to invest in ruinously expensive data-conversion programs. Quality assurance advances with not only a stereoscopic top-down and bottom-up planning method, but also the incorporation of the latest in automated test engines. Use this step-by-step guide to deepen your own application development skills through self-study, show your teammates the world's fastest and most reliable techniques for creating business intelligence systems, or ensure that the IT department working for you is building your next decision support system the right way. Learn how to quickly define scope and architecture before programming starts. Includes techniques of process and data engineering that enable iterative and incremental delivery. Demonstrates how to plan and execute quality assurance plans and includes a guide to continuous integration and automated regression testing. Presents program management strategies for coordinating multiple agile data mart projects so that over time an enterprise data warehouse emerges. Use the provided 120-day road map to establish a robust, agile data warehousing program.

Unlike popular belief, Data Warehouse is not a single tool but a collection of software tools. A data warehouse will collect data from diverse sources into a single database. Using Business Intelligence tools, meaningful insights are drawn from this data. The best thing about "Learn Data Warehousing in 1 Day" is that it is small and can be completed in a day. With this e-book, you will be enough knowledge to contribute and participate in a Data warehouse implementation project. The book covers upcoming and promising technologies like Data Lakes, Data Mart, ELT (Extract Load Transform) amongst others. Following are detailed topics included in the book Table content Chapter 1: What Is Data Warehouse? What is Data Warehouse? Types of Data Warehouse Who needs Data warehouse? Why We Need Data Warehouse? Data Warehouse Tools Chapter 2: Data Warehouse Architecture Characteristics of Data warehouse Data Warehouse Architectures Datawarehouse Components Query Tools Chapter 3: ETL Process What is ETL? Why do you need ETL? ETL Process ETL tools Chapter 4: ETL Vs ELT What is ETL? Difference between ETL vs. ELT Chapter 5: Data Modeling What is Data Modelling? Types of Data Models Characteristics of a physical data model Chapter 6: OLAP What is Online Analytical Processing? Types of OLAP systems Advantages and Disadvantages of OLAP Chapter 7: Multidimensional Olap (MOLAP) What is MOLAP? MOLAP Architecture MOLAP Tools Chapter 8: OLAP

Vs OLTP What is the meaning of OLAP? What is the meaning of OLTP? Difference between OLTP and OLAP Chapter 9: Dimensional Modeling What is Dimensional Model? Elements of Dimensional Data Model Attributes Difference between Dimension table vs. Fact table Steps of Dimensional Modelling Rules for Dimensional Modelling Chapter 10: Star and Snowflake Schema What is Multidimensional schemas? What is a Star Schema? What is a Snowflake Schema? Difference between Start Schema and Snowflake Chapter 11: Data Mart What is Data Mart? Type of Data Mart Steps in Implementing a Datamart Chapter 12: Data Mart Vs Data Warehouse What is Data Warehouse? What is Data Mart? Differences between a Data Warehouse and a Data Mart Chapter 13: Data Lake What is Data Lake? Data Lake Architecture Key Data Lake Concepts Maturity stages of Data Lake Chapter 14: Data Lake Vs Data Warehouse What is Data Warehouse? What is Data Lake? Key Difference between the Data Lake and Data Warehouse Chapter 15: What Is Business Intelligence? What is Business Intelligence Why is BI important? How Business Intelligence systems are implemented? Four types of BI users Chapter 16: Data Mining What is Data Mining? Types of Data Data Mining Process Modelling

CYMBELINE, King of Britain CLOTEN, son to the Queen by a former husband POSTHUMUS LEONATUS, a gentleman, husband to Imogen BELARIUS, a banished lord, disguised under the name of Morgan GUIDERIUS and ARVIRAGUS, sons to Cymbeline, disguised under the names of POLYDORE and CADWAL, supposed sons to Belarius PHILARIO, Italian, friend to Posthumus IACHIMO, Italian, friend to Philario A FRENCH GENTLEMAN, friend to Philario CAIUS LUCIUS, General of the Roman Forces A ROMAN CAPTAIN TWO BRITISH CAPTAINS PISANIO, servant to Posthumus CORNELIUS, a physician TWO LORDS of Cymbeline's court TWO GENTLEMEN of the same TWO GAOLERS

Foreword by Mark Stephen LaRow, Vice President of Products, MicroStrategy "A unique and authoritative book that blends recent research developments with industry-level practices for researchers, students, and industry practitioners." Il-Yeol Song, Professor, College of Information Science and Technology, Drexel University

Updated new edition of Ralph Kimball's groundbreaking book on dimensional modeling for data warehousing and business intelligence! The first edition of Ralph Kimball's The Data Warehouse Toolkit introduced the industry to dimensional modeling, and now his books are considered the most authoritative guides in this space. This new third edition is a complete library of updated dimensional modeling techniques, the most comprehensive collection ever. It covers new and enhanced star schema dimensional modeling patterns, adds two new chapters on ETL techniques, includes new and expanded business matrices for 12 case studies, and more. Authored by Ralph Kimball and Margy Ross, known worldwide as educators, consultants, and influential thought leaders in data warehousing and business intelligence Begins with fundamental design recommendations and progresses through increasingly complex scenarios Presents unique modeling techniques for business applications such as inventory management, procurement, invoicing, accounting, customer relationship management, big data analytics, and more Draws real-world case studies from a variety of industries, including retail sales, financial services, telecommunications, education, health care, insurance, e-commerce, and more Design dimensional databases that are easy to understand and provide fast query response with The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling, 3rd Edition.

Agile Data Warehouse Design is a step-by-step guide for capturing data warehousing/business intelligence (DW/BI) requirements and turning them into high performance dimensional models in the most direct way: by modelstorming (data modeling] brainstorming) with BI stakeholders. This book describes BEAM, an agile approach to dimensional modeling, for improving communication between data warehouse designers, BI stakeholders and the whole DW/BI development team. BEAM provides tools and techniques that will encourage DW/BI

designers and developers to move away from their keyboards and entity relationship based tools and model interactively with their colleagues. The result is everyone thinks dimensionally from the outset! Developers understand how to efficiently implement dimensional modeling solutions. Business stakeholders feel ownership of the data warehouse they have created, and can already imagine how they will use it to answer their business questions. Within this book, you will learn: Agile dimensional modeling using Business Event Analysis & Modeling (BEAM) Modelstorming: data modeling that is quicker, more inclusive, more productive, and frankly more fun! Telling dimensional data stories using the 7Ws (who, what, when, where, how many, why and how) Modeling by example not abstraction; using data story themes, not crow's feet, to describe detail Storyboarding the data warehouse to discover conformed dimensions and plan iterative development Visual modeling: sketching timelines, charts and grids to model complex process measurement - simply Agile design documentation: enhancing star schemas with BEAM dimensional shorthand notation Solving difficult DW/BI performance and usability problems with proven dimensional design patterns LawrenceCorr is a data warehouse designer and educator. As Principal of DecisionOne Consulting, he helps clients to review and simplify their data warehouse designs, and advises vendors on visual data modeling techniques. He regularly teaches agile dimensional modeling courses worldwide and has taught dimensional DW/BI skills to thousands of students. Jim Stagnitto is a data warehouse and master data management architect specializing in the healthcare, financial services, and information service industries. He is the founder of the data warehousing and data mining consulting firm Llumino.

Focus your efforts on the best opportunities --

The final edition of the incomparable data warehousing and business intelligence reference, updated and expanded The Kimball Group Reader, Remastered Collection is the essential reference for data warehouse and business intelligence design, packed with best practices, design tips, and valuable insight from industry pioneer Ralph Kimball and the Kimball Group. This Remastered Collection represents decades of expert advice and mentoring in data warehousing and business intelligence, and is the final work to be published by the Kimball Group. Organized for quick navigation and easy reference, this book contains nearly 20 years of experience on more than 300 topics, all fully up-to-date and expanded with 65 new articles. The discussion covers the complete data warehouse/business intelligence lifecycle, including project planning, requirements gathering, system architecture, dimensional modeling, ETL, and business intelligence analytics, with each group of articles prefaced by original commentaries explaining their role in the overall Kimball Group methodology. Data warehousing/business intelligence industry's current multi-billion dollar value is due in no small part to the contributions of Ralph Kimball and the Kimball Group. Their publications are the standards on which the industry is built, and nearly all data warehouse hardware and software vendors have adopted their methods in one form or another. This book is a compendium of Kimball Group expertise, and an essential reference for anyone in the field. Learn data warehousing and business intelligence from the field's pioneers Get up to date on best practices and essential design tips Gain valuable knowledge on every stage of the project lifecycle Dig into the Kimball Group methodology with hands-on guidance Ralph Kimball and the Kimball Group have continued to refine their methods and

techniques based on thousands of hours of consulting and training. This Remastered Collection of The Kimball Group Reader represents their final body of knowledge, and is nothing less than a vital reference for anyone involved in the field.

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.

A thorough update to the industry standard for designing, developing, and deploying data warehouse and business intelligence systems The world of data warehousing has changed remarkably since the first edition of The Data Warehouse Lifecycle Toolkit was published in 1998. In that time, the data warehouse industry has reached full maturity and acceptance, hardware and software have made staggering advances, and the techniques promoted in the premiere edition of this book have been adopted by nearly all data warehouse vendors and practitioners. In addition, the term "business intelligence" emerged to reflect the mission of the data warehouse: wrangling the data out of source systems, cleaning it, and delivering it to add value to the business. Ralph Kimball and his colleagues have refined the original set of Lifecycle methods and techniques based on their consulting and training experience. The authors understand first-hand that a data warehousing/business intelligence (DW/BI) system needs to change as fast as its surrounding organization evolves. To that end, they walk you through the detailed steps of designing, developing, and deploying a DW/BI system. You'll learn to create adaptable systems that deliver data and analyses to business users so they can make better business decisions.

With this textbook, Vaisman and Zimányi deliver excellent coverage of data warehousing and business intelligence technologies ranging from the most basic principles to recent findings and applications. To this end, their work is structured into three parts. Part I describes "Fundamental Concepts" including multi-dimensional models; conceptual and logical data warehouse design and MDX and SQL/OLAP. Subsequently, Part II details "Implementation and

Deployment,” which includes physical data warehouse design; data extraction, transformation, and loading (ETL) and data analytics. Lastly, Part III covers “Advanced Topics” such as spatial data warehouses; trajectory data warehouses; semantic technologies in data warehouses and novel technologies like Map Reduce, column-store databases and in-memory databases. As a key characteristic of the book, most of the topics are presented and illustrated using application tools. Specifically, a case study based on the well-known Northwind database illustrates how the concepts presented in the book can be implemented using Microsoft Analysis Services and Pentaho Business Analytics. All chapters are summarized using review questions and exercises to support comprehensive student learning. Supplemental material to assist instructors using this book as a course text is available at <http://cs.ulb.ac.be/DWSDIbook/>, including electronic versions of the figures, solutions to all exercises, and a set of slides accompanying each chapter. Overall, students, practitioners and researchers alike will find this book the most comprehensive reference work on data warehouses, with key topics described in a clear and educational style.

Three books by the bestselling authors on Data Warehousing! The most authoritative guides from the inventor of the technique all for a value price. The Data Warehouse Toolkit, 3rd Edition (9781118530801) Ralph Kimball invented a data warehousing technique called "dimensional modeling" and popularized it in his first Wiley book, The Data Warehouse Toolkit. Since this book was first published in 1996, dimensional modeling has become the most widely accepted technique for data warehouse design. Over the past 10 years, Kimball has improved on his earlier techniques and created many new ones. In this 3rd edition, he will provide a comprehensive collection of all of these techniques, from basic to advanced. The Data Warehouse Lifecycle Toolkit, 2nd Edition (9780470149775) Complete coverage of best practices from data warehouse project inception through on-going program management. Updates industry best practices to be in sync with current recommendations of Kimball Group. Streamlines the lifecycle methodology to be more efficient and user-friendly The Data Warehouse ETL Toolkit (9780764567575) shows data warehouse developers how to effectively manage the ETL (Extract, Transform, Load) phase of the data warehouse development lifecycle. The authors show developers the best methods for extracting data from scattered sources throughout the enterprise, removing obsolete, redundant, and innaccurate data, transforming the remaining data into correctly formatted data structures, and then physically loading them into the data warehouse. This book provides complete coverage of proven, time-saving ETL techniques. It begins with a quick overview of ETL fundamentals and the role of the ETL development team. It then quickly moves into an overview of the ETL data structures, both relational and dimensional. The authors show how to build useful dimensional structures, providing practical examples of beginning through advanced techniques. Develop a custom, agile data warehousing and business intelligence architecture Empower your users and drive better

decision making across your enterprise with detailed instructions and best practices from an expert developer and trainer. The Data Warehouse Mentor: Practical Data Warehouse and Business Intelligence Insights shows how to plan, design, construct, and administer an integrated end-to-end DW/BI solution. Learn how to choose appropriate components, build an enterprise data model, configure data marts and data warehouses, establish data flow, and mitigate risk. Change management, data governance, and security are also covered in this comprehensive guide. Understand the components of BI and data warehouse systems Establish project goals and implement an effective deployment plan Build accurate logical and physical enterprise data models Gain insight into your company's transactions with data mining Input, cleanse, and normalize data using ETL (Extract, Transform, and Load) techniques Use structured input files to define data requirements Employ top-down, bottom-up, and hybrid design methodologies Handle security and optimize performance using data governance tools Robert Laberge is the founder of several Internet ventures and a principle consultant for the IBM Industry Models and Assets Lab, which has a focus on data warehousing and business intelligence solutions.

Geared to IT professionals eager to get into the all-important field of data warehousing, this book explores all topics needed by those who design and implement data warehouses. Readers will learn about planning requirements, architecture, infrastructure, data preparation, information delivery, implementation, and maintenance. They'll also find a wealth of industry examples garnered from the author's 25 years of experience in designing and implementing databases and data warehouse applications for major corporations. Market: IT Professionals, Consultants.

Ralph Kimball's three data warehousing books, The Data Warehouse Toolkit, The Data Warehouse Lifecycle Toolkit, and The Data Webhouse Toolkit, provide you with everything you will need to create, manage, and use your data warehouse. His first book, The Data Warehouse Toolkit, is the definitive guide to building a data warehouse. Kimball uses actual case studies of existing data warehouses developed for specific types of business applications such as retail, manufacturing, banking, insurance, subscriptions and airline reservations. Using the techniques learned in Kimball's first book, The Data Warehouse Lifecycle Toolkit carries them to the larger issues of delivering complete data marts and data warehouses. The book shows you all the practical details involved in planning, designing, developing, deploying, and growing data warehouses. The Data Webhouse Toolkit is a groundbreaking guide which introduces the Webhouse, a powerful new way of capturing valuable information flowing into a Web site and ordering it in ways that are useful to managers, strategic decision-makers, and customers.

Cowritten by Ralph Kimball, the world's leading data warehousing authority, whose previous books have sold more than 150,000 copies Delivers real-world solutions for the most time- and labor-intensive portion of data warehousing-data

staging, or the extract, transform, load (ETL) process Delineates best practices for extracting data from scattered sources, removing redundant and inaccurate data, transforming the remaining data into correctly formatted data structures, and then loading the end product into the data warehouse Offers proven time-saving ETL techniques, comprehensive guidance on building dimensional structures, and crucial advice on ensuring data quality

"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 terminology, 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.

The Data Vault was invented by Dan Linstedt at the U.S. Department of Defense, and the standard has been successfully applied to data warehousing projects at organizations of different sizes, from small to large-size corporations. Due to its simplified design, which is adapted from nature, the Data Vault 2.0 standard helps prevent typical data warehousing failures. "Building a Scalable Data Warehouse" covers everything one needs to know to create a scalable data warehouse end to end, including a presentation of the Data Vault modeling technique, which provides the foundations to create a technical data warehouse layer. The book discusses how to build the data warehouse incrementally using the agile Data Vault 2.0 methodology. In addition, readers will learn how to create the input layer (the stage layer) and the presentation layer (data mart) of the Data Vault 2.0 architecture including implementation best practices. Drawing upon years of practical experience and using numerous examples and an easy to understand framework, Dan Linstedt and Michael Olschimke discuss: How to load each layer using SQL Server Integration Services (SSIS), including automation of the Data Vault loading processes. Important data warehouse technologies and practices. Data Quality Services (DQS) and Master Data Services (MDS) in the context of the Data Vault architecture. Provides a complete introduction to data warehousing, applications, and the business context so readers can get-up and running fast Explains theoretical concepts and provides hands-on instruction on how to build and implement a data warehouse Demystifies data vault modeling with beginning, intermediate, and advanced techniques Discusses the advantages of the data vault approach over other techniques, also including the latest updates to Data Vault 2.0 and multiple improvements to Data Vault 1.0

Data pipelines are the foundation for success in data analytics. Moving data from numerous diverse sources and transforming it to provide context is the difference between having data and actually gaining value from it. This pocket reference defines data pipelines and explains how they work in today's modern data stack. You'll learn common considerations and key decision points when implementing pipelines, such as batch versus streaming data ingestion and build versus buy. This book addresses the most common decisions made by data professionals and discusses foundational concepts that apply to open source frameworks, commercial products, and homegrown solutions. You'll learn: What a data pipeline is and how it works How data is moved and processed on modern data infrastructure, including cloud platforms Common tools and products used by data engineers to build pipelines How pipelines support analytics and reporting needs Considerations for pipeline maintenance, testing, and alerting

Here is the ideal field guide for data warehousing implementation. This book first teaches you how to build a data

warehouse, including defining the architecture, understanding the methodology, gathering the requirements, designing the data models, and creating the databases. Coverage then explains how to populate the data warehouse and explores how to present data to users using reports and multidimensional databases and how to use the data in the data warehouse for business intelligence, customer relationship management, and other purposes. It also details testing and how to administer data warehouse operation.

This business classic features straight-talking advice you'll never hear in school. Featuring a new foreword by Ariel Emanuel and Patrick Whitesell Mark H. McCormack, one of the most successful entrepreneurs in American business, is widely credited as the founder of the modern-day sports marketing industry. On a handshake with Arnold Palmer and less than a thousand dollars, he started International Management Group and, over a four-decade period, built the company into a multimillion-dollar enterprise with offices in more than forty countries. To this day, McCormack's business classic remains a must-read for executives and managers at every level. Relating his proven method of "applied people sense" in key chapters on sales, negotiation, reading others and yourself, and executive time management, McCormack presents powerful real-world guidance on • the secret life of a deal • management philosophies that don't work (and one that does) • the key to running a meeting—and how to attend one • the positive use of negative reinforcement • proven ways to observe aggressively and take the edge • and much more Praise for What They Don't Teach You at Harvard Business School "Incisive, intelligent, and witty, What They Don't Teach You at Harvard Business School is a sure winner—like the author himself. Reading it has taught me a lot."—Rupert Murdoch, executive chairman, News Corp, chairman and CEO, 21st Century Fox "Clear, concise, and informative . . . Like a good mentor, this book will be a valuable aid throughout your business career."—Herbert J. Siegel, chairman, Chris-Craft Industries, Inc. "Mark McCormack describes the approach I have personally seen him adopt, which has not only contributed to the growth of his business, but mine as well."—Arnold Palmer "There have been what we love to call dynasties in every sport. IMG has been different. What this one brilliant man, Mark McCormack, created is the only dynasty ever over all sport."—Frank Deford, senior contributing writer, Sports Illustrated

Cowritten by Ralph Kimball, the world's leading data warehousing authority Delivers real-world solutions for the most time- and labor-intensive portion of data warehousing—data staging, or the extract, transform, load (ETL) process Delineates best practices for extracting data from scattered sources, removing redundant and inaccurate data, transforming the remaining data into correctly formatted data structures, and then loading the end product into the data warehouse Offers proven time-saving ETL techniques, comprehensive guidance on building dimensional structures, and crucial advice on ensuring data quality This book is also available as part of the Kimball's Data Warehouse Toolkit

Classics Box Set (ISBN: 9780470479575) with the following 3 books: The Data Warehouse Toolkit, 2nd Edition (9780471200246) The Data Warehouse Lifecycle Toolkit, 2nd Edition (9780470149775) The Data Warehouse ETL Toolkit (9780764567575)

Ralph Kimball invented a data warehousing technique called "dimensional modelling" and popularised it in his first Wiley bestseller The Data Warehouse Toolkit. Since then dimensional modelling has become the most widely accepted technique for data warehouse design. Since the first edition, Kimball has improved on his earlier techniques and created many new ones. In this second edition, he provides a comprehensive collection of all of them, from basic to advanced, and strategies for optimising data warehouse design for common business applications. He includes examples for retail sales, inventory management, procurement, orders and invoices, customer relationship management, accounting, financial services, telecommunication and utilities, health care, insurance and more. He also presents unique modelling techniques for e-commerce and shows strategies for optimising performance. A companion Web site provides updates on dimensional modelling techniques, links to related sites and source code where appropriate.

The first, step-by-step guide to building Web-enabled data warehouses The Web can be an incredibly rich source of customer data, and right now companies across industry sectors are hustling to get up and running with data warehouses capable of capturing the clickstream data from their Web sites. This allows companies to track exactly where a customer is going, or "clicking to," on their site in order to gain meaningful information about that customer's preferences. Following Ralph Kimball's The Data Warehouse Toolkit (0-471-37680-9) where he provides the blueprint, Clickstream Data Warehousing fills developers in on all the technical details that go into building a Web-enabled data warehouse. The authors review all key architectural and design issues that developers need to masterfully build a Webhouse using examples to illustrate key points. Companion Web site features code examples from the book and links to related Web sites.

The data warehousing bible updated for the new millennium Updated and expanded to reflect the many technological advances occurring since the previous edition, this latest edition of the data warehousing "bible" provides a comprehensive introduction to building data marts, operational data stores, the Corporate Information Factory, exploration warehouses, and Web-enabled warehouses. Written by the father of the data warehouse concept, the book also reviews the unique requirements for supporting e-business and explores various ways in which the traditional data warehouse can be integrated with new technologies to provide enhanced customer service, sales, and support-both online and offline-including near-line data storage techniques.

A cutting-edge response to Ralph Kimball's challenge to the data warehouse community that answers some tough questions about the effectiveness of the relational approach to data warehousing Written by one of the best-known exponents of the Bill Inmon approach to data warehousing Addresses head-on the tough issues raised by Kimball and explains how to choose the best modeling technique for solving common data warehouse design problems Weighs the pros and cons of relational vs. dimensional modeling techniques Focuses on tough modeling problems, including creating and maintaining keys and modeling calendars,

hierarchies, transactions, and data quality

The definitive guide to dimensional design for your data warehouse Learn the best practices of dimensional design. Star Schema: The Complete Reference offers in-depth coverage of design principles and their underlying rationales. Organized around design concepts and illustrated with detailed examples, this is a step-by-step guidebook for beginners and a comprehensive resource for experts. This all-inclusive volume begins with dimensional design fundamentals and shows how they fit into diverse data warehouse architectures, including those of W.H. Inmon and Ralph Kimball. The book progresses through a series of advanced techniques that help you address real-world complexity, maximize performance, and adapt to the requirements of BI and ETL software products. You are furnished with design tasks and deliverables that can be incorporated into any project, regardless of architecture or methodology. Master the fundamentals of star schema design and slow change processing Identify situations that call for multiple stars or cubes Ensure compatibility across subject areas as your data warehouse grows Accommodate repeating attributes, recursive hierarchies, and poor data quality Support conflicting requirements for historic data Handle variation within a business process and correlation of disparate activities Boost performance using derived schemas and aggregates Learn when it's appropriate to adjust designs for BI and ETL tools

". . . one of the definitive books of our industry. If you take the time to read only one professional book, make it this book." -W. H. Inmon One of the most dramatic new developments in database design, the dimensional data warehouse is a powerful database model that significantly enhances managers' ability to quickly analyze large, multidimensional data sets. Written by the leading proponent of this revolutionary new approach, this valuable book/CD toolkit outfits you with all the nuts-and-bolts information you need to design, build, manage, and use dimensional data warehouses for virtually any type of business application, as well as software for querying dimensional data warehouses. Employing many real-life case studies of data warehouses, Ralph Kimball provides clear-cut guidelines on how to model data and design data warehouses to support advanced multidimensional decision support systems. Beginning with the relatively simple example of a data warehouse for a grocery store, he progresses, step-by-step, through an increasingly complex array of business applications in retail, manufacturing, banking, insurance, subscriptions, and airline reservations. By the end of the book, you will have mastered the full range of powerful techniques for creating, controlling, and navigating dimensional business databases that are easy to understand and navigate. On the CD-ROM you'll find:

- * Software for querying dimensional data warehouses.
- * Working models of all the databases described in the book.

"Each chapter is... a practice run for the way we all ought to design our data marts and hence our data warehouses."-Ralph Kimball, from the Foreword. Let the experts show you how to customize data warehouse designs for real business needs in Data Warehouse Design Solutions. To effectively design a data warehouse, you have to understand its many business uses. This guidebook shows you how business managers in different corporate functions actually use data warehouses to make decisions. You'll get a rich set of data warehouse designs that flow from realistic business cases. Two top experts show you how to customize your data warehouse designs for real-life business needs including:

- * Sales and marketing
- * Production and inventory

management * Budgeting and financial reporting * Quality control * Product delivery and fulfillment * Strategic business analysis such as determining market share, rates of return on investment, and other key analytic ratios. CD-ROM includes All sample data warehouse designs with accompanying preformatted reports in HTML for specific business uses such as marketing, sales, and financial analysis.

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