

Data Modeling Made Simple A Practical For Business And It Professionals 2nd Edition

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Expert Data Modeling with Power BI - Soheil Bakhshi 2021-06-11

Manage and work with business data effectively by learning data modeling techniques and leveraging the latest features of Power BI Key Features Understand data modeling techniques to get the best out of data using Power BI Define the relationships between data to extract valuable insights Solve a wide variety of business challenges by building optimal data models Book Description Microsoft Power BI is one of the most popular business intelligence tools available on the market for desktop and the cloud. This book will be your guide to understanding the ins and outs of data modeling and how to create data models using Power BI confidently. You'll learn how to connect data from multiple sources, understand data, define and manage relationships between data, and shape data models. In this book, you'll explore how to use data modeling and navigation techniques to define relationships and create a data model before defining new metrics and performing custom calculations using modeling features. As you advance through the chapters, the book will demonstrate how to create full-fledged data models, enabling you to create efficient data models and simpler DAX code with new data modeling features. With the help of examples, you'll discover how you can solve business challenges by building optimal data models and changing your existing data models to meet evolving business requirements. Finally, you'll learn how to use some new and advanced modeling features to enhance your data models to carry out a wide variety of complex tasks. By the end of this Power BI book, you'll have gained the skills you need to structure data coming from multiple sources in different ways to create optimized data models that support reporting and data analytics. What you will learn Implement virtual tables and time intelligence functionalities in DAX to build a powerful model Identify Dimension and Fact tables and implement them in Power Query Editor Deal with advanced data preparation scenarios while building Star Schema Explore best practices for data preparation and data modeling Discover different hierarchies and their common pitfalls Understand complex data models and how to decrease the level of model complexity with different data modeling approaches Who this book is for This MS Power BI book is for BI users, data analysts, and analysis developers who want to become well-versed with data modeling techniques to make the most of Power BI. Basic knowledge of Power BI and Star Schema will help you to understand the concepts covered in this book.

Data Modeling for the Business - Steve Hoberman 2009-04-01

Did you ever try getting Businesspeople and IT to agree on the project scope for a new application? Or try getting Marketing and Sales to agree on the target audience? Or try bringing new team members up to speed on the hundreds of tables in your data warehouse — without them dozing off? Whether you are a businessperson or an IT professional, you can be the hero in each of these and hundreds of other scenarios by building a High-Level Data Model. The High-Level Data Model is a simplified view of our complex environment. It can be a powerful communication tool of the key concepts within our application development projects, business intelligence and master data management programs, and all enterprise and industry initiatives. Learn about the High-Level Data Model and master the techniques for building one, including a comprehensive ten-step approach and hands-on

exercises to help you practice topics on your own. In this book, we review data modeling basics and explain why the core concepts stored in a high-level data model can have significant business impact on an organization. We explain the technical notation used for a data model and walk through some simple examples of building a high-level data model. We also describe how data models relate to other key initiatives you may have heard of or may be implementing in your organization. This book contains best practices for implementing a high-level data model, along with some easy-to-use templates and guidelines for a step-by-step approach. Each step will be illustrated using many examples based on actual projects we have worked on. Names have been changed to protect the innocent, but the pain points and lessons have been preserved. One example spans an entire chapter and will allow you to practice building a high-level data model from beginning to end, and then compare your results to ours. Building a high-level data model following the ten step approach you'll read about is a great way to ensure you will retain the new skills you learn in this book. As is the case in many disciplines, using the right tool for the right job is critical to the overall success of your high-level data model implementation. To help you in your tool selection process, there are several chapters dedicated to discussing what to look for in a high-level data modeling tool and a framework for choosing a data modeling tool, in general. This book concludes with a real-world case study that shows how an international energy company successfully used a high-level data model to streamline their information management practices and increase communication throughout the organization—between both businesspeople and IT. Data modeling is one of the under-exploited, and potentially very valuable, business capabilities that are often hidden away in an organization's Information Technology department. Data Modeling for the Business highlights both the resulting damage to business value, and the opportunities to make things better. As an easy-to follow and comprehensive guide on the 'why' and 'how' of data modeling, it also reminds us that a successful strategy for exploiting IT depends at least as much on the information as the technology. Chris Potts, Corporate IT Strategist and Author of fruITion: Creating the Ultimate Corporate Strategy for Information Technology One of the most critical systems issues is aligning business with IT and fulfilling business needs using data models. The authors of Data Modeling for the Business do a masterful job at simply and clearly describing the art of using data models to communicate with business representatives and meet business needs. The book provides many valuable tools, analogies, and step-by-step methods for effective data modeling and is an important contribution in bridging the much needed connection between data modeling and realizing business requirements. Len Silverston, author of The Data Model Resource Book series

Domain Modeling Made Functional - Scott Wlaschin 2018-01-25

You want increased customer satisfaction, faster development cycles, and less wasted work. Domain-driven design (DDD) combined with functional programming is the innovative combo that will get you there. In this pragmatic, down-to-earth guide, you'll see how applying the core principles of functional programming can result in software designs that model real-world requirements both elegantly and concisely - often more so than an object-oriented

approach. Practical examples in the open-source F# functional language, and examples from familiar business domains, show you how to apply these techniques to build software that is business-focused, flexible, and high quality. Domain-driven design is a well-established approach to designing software that ensures that domain experts and developers work together effectively to create high-quality software. This book is the first to combine DDD with techniques from statically typed functional programming. This book is perfect for newcomers to DDD or functional programming - all the techniques you need will be introduced and explained. Model a complex domain accurately using the F# type system, creating compilable code that is also readable documentation---ensuring that the code and design never get out of sync. Encode business rules in the design so that you have "compile-time unit tests," and eliminate many potential bugs by making illegal states unrepresentable. Assemble a series of small, testable functions into a complete use case, and compose these individual scenarios into a large-scale design. Discover why the combination of functional programming and DDD leads naturally to service-oriented and hexagonal architectures. Finally, create a functional domain model that works with traditional databases, NoSQL, and event stores, and safely expose your domain via a website or API. Solve real problems by focusing on real-world requirements for your software. What You Need: The code in this book is designed to be run interactively on Windows, Mac and Linux. You will need a recent version of F# (4.0 or greater), and the appropriate .NET runtime for your platform. Full installation instructions for all platforms at fsharp.org.

Data Resource Data - Michael Brackett 2014-08-15

Data Resource Data provides the complete detailed data resource model for understanding and managing data as a critical resource of the organization.

Data Modeling Made Simple - Steve Hoberman 2007-06-01

Ever have a bad data day? If you are a business user, architect, analyst, designer or developer, then you have probably had some bad data days. It comes with the territory. Overcoming these problems is much easier if you have an in-depth understanding of the actual data. That's where a data model comes in handy. It's a diagram that uses text and symbols to represent groupings of data, giving you a clear picture of your business and application environment

Data Modeling for Quality - Graham Witt 2021-01-19

This book is for all data modelers, data architects, and database designers—be they novices who want to learn what's involved in data modeling, or experienced modelers who want to brush up their skills. A novice will not only gain an overview of data modeling, they will also learn how to follow the data modeling process, including the activities required for each step. The experienced practitioner will discover (or rediscover) techniques to ensure that data models accurately reflect business requirements. This book describes rigorous yet easily implemented approaches to:

- modeling of business information requirements for review by business stakeholders before development of the logical data model
- normalizing data, based on simple questions rather than the formal definitions which many modelers find intimidating
- naming and defining concepts and attributes
- modeling of time-variant data
- documenting business rules governing both the real world and data
- data modeling in an Agile project
- managing data model change in any type of project
- transforming a business information model to a logical data model against which developers can code
- implementing the logical data model in a traditional relational DBMS, an SQL:2003-compliant DBMS, an object-relational DBMS, or in XML.

Part 1 describes business information models in-depth, including:

- the importance of modeling business information requirements before embarking on a logical data model
- business concepts (entity classes)
- attributes of business concepts
- attribute classes as an alternative to DBMS data types
- relationships between business concepts
- time-variant data
- generalization and specialization of business concepts
- naming and defining the components of the business information model
- business rules governing data, including a distinction between real-world rules and data rules.

Part 2 journeys

from requirements to a working data resource, covering:

- sourcing data requirements
- developing the business information model
- communicating it to business stakeholders for review, both as diagrams and verbally
- managing data model change
- transforming the business information model into a logical data model of stored data for implementation in a relational or object-relational DBMS
- attribute value representation and data constraints (important but often overlooked)
- modeling data vault, dimensional and XML data.

[Developing High Quality Data Models](#) - Matthew West 2011-02-07

Developing High Quality Data Models provides an introduction to the key principles of data modeling. It explains the purpose of data models in both developing an Enterprise Architecture and in supporting Information Quality; common problems in data model development; and how to develop high quality data models, in particular conceptual, integration, and enterprise data models. The book is organized into four parts. Part 1 provides an overview of data models and data modeling including the basics of data model notation; types and uses of data models; and the place of data models in enterprise architecture. Part 2 introduces some general principles for data models, including principles for developing ontologically based data models; and applications of the principles for attributes, relationship types, and entity types. Part 3 presents an ontological framework for developing consistent data models. Part 4 provides the full data model that has been in development throughout the book. The model was created using Jotne EPM Technologys EDMVisualExpress data modeling tool. This book was designed for all types of modelers: from those who understand data modeling basics but are just starting to learn about data modeling in practice, through to experienced data modelers seeking to expand their knowledge and skills and solve some of the more challenging problems of data modeling. Uses a number of common data model patterns to explain how to develop data models over a wide scope in a way that is consistent and of high quality Offers generic data model templates that are reusable in many applications and are fundamental for developing more specific templates Develops ideas for creating consistent approaches to high quality data models

Data Modeling, A Beginner's Guide - Andy Oppel 2009-11-23

Essential Skills--Made Easy! Learn how to create data models that allow complex data to be analyzed, manipulated, extracted, and reported upon accurately. Data Modeling: A Beginner's Guide teaches you techniques for gathering business requirements and using them to produce conceptual, logical, and physical database designs. You'll get details on Unified Modeling Language (UML), normalization, incorporating business rules, handling temporal data, and analytical database design. The methods presented in this fast-paced tutorial are applicable to any database management system, regardless of vendor. Designed for Easy Learning Key Skills & Concepts--Chapter-opening lists of specific skills covered in the chapter Ask the expert--Q&A sections filled with bonus information and helpful tips Try This--Hands-on exercises that show you how to apply your skills Notes--Extra information related to the topic being covered Self Tests--Chapter-ending quizzes to test your knowledge Andy Oppel has taught database technology for the University of California Extension for more than 25 years. He is the author of Databases Demystified, SQL Demystified, and Databases: A Beginner's Guide, and the co-author of SQL: A Beginner's Guide, Third Edition, and SQL: The Complete Reference, Third Edition.

Data Modeling Essentials - Graeme Simsion 2004-12-03

Data Modeling Essentials, Third Edition, covers the basics of data modeling while focusing on developing a facility in techniques, rather than a simple familiarization with "the rules". In order to enable students to apply the basics of data modeling to real models, the book addresses the realities of developing systems in real-world situations by assessing the merits of a variety of possible solutions as well as using language and diagramming methods that represent industry practice. This revised edition has been given significantly expanded coverage and reorganized for greater reader comprehension even as it retains its distinctive hallmarks of readability and usefulness.

Beginning with the basics, the book provides a thorough grounding in theory before guiding the reader through

the various stages of applied data modeling and database design. Later chapters address advanced subjects, including business rules, data warehousing, enterprise-wide modeling and data management. It includes an entirely new section discussing the development of logical and physical modeling, along with new material describing a powerful technique for model verification. It also provides an excellent resource for additional lectures and exercises. This text is the ideal reference for data modelers, data architects, database designers, DBAs, and systems analysts, as well as undergraduate and graduate-level students looking for a real-world perspective. Thorough coverage of the fundamentals and relevant theory. Recognition and support for the creative side of the process. Expanded coverage of applied data modeling includes new chapters on logical and physical database design. New material describing a powerful technique for model verification. Unique coverage of the practical and human aspects of modeling, such as working with business specialists, managing change, and resolving conflict.

Data Modeling Made Simple - Steve Hoberman 2009

Read today's business headlines and you will see that many issues stem from people not having the right data at the right time. Data issues don't always make the front page, yet they exist within every organisation. We need to improve how we manage data -- and the most valuable tool for explaining, validating and managing data is a data model. This book provides the business or IT professional with a practical working knowledge of data modelling concepts and best practices. This book is written in a conversational style that encourages you to read it from start to finish and master these ten objectives: Know when a data model is needed and which type of data model is most effective for each situation; Read a data model of any size and complexity with the same confidence as reading a book; Build a fully normalised relational data model, as well as an easily navigatable dimensional model; Apply techniques to turn a logical data model into an efficient physical design; Leverage several templates to make requirements gathering more efficient and accurate; Explain all ten categories of the Data Model Scorecard®; Learn strategies to improve your working relationships with others; Appreciate the impact unstructured data has, and will have, on our data modelling deliverables; Learn basic UML concepts; Put data modelling in context with XML, metadata, and agile development.

Data Modeling Master Class Training Manual 7th Edition - Steve Hoberman 2017-06

This is the seventh edition of the training manual for the Data Modeling Master Class that Steve Hoberman teaches onsite and through public classes. This text can be purchased prior to attending the Master Class, the latest course schedule and detailed description can be found on Steve Hoberman's website, stevhoberman.com. The Master Class is a complete data modeling course, containing three days of practical techniques for producing conceptual, logical, and physical relational and dimensional and NoSQL data models. After learning the styles and steps in capturing and modeling requirements, you will apply a best practices approach to building and validating data models through the Data Model Scorecard(R). You will know not just how to build a data model, but how to build a data model well. Two case studies and many exercises reinforce the material and will enable you to apply these techniques in your current projects. Top 10 Objectives

1. Explain data modeling components and identify them on your projects by following a question-driven approach
2. Demonstrate reading a data model of any size and complexity with the same confidence as reading a book
3. Validate any data model with key "settings" (scope, abstraction, timeframe, function, and format) as well as through the Data Model Scorecard(R)
4. Apply requirements elicitation techniques including interviewing, artifact analysis, prototyping, and job shadowing
5. Build relational and dimensional conceptual and logical data models, and know the tradeoffs on the physical side for both RDBMS and NoSQL solutions
6. Practice finding structural soundness issues and standards violations
7. Recognize when to use abstraction and where patterns and industry data models can give us a great head start
8. Use a series of templates for capturing and validating requirements, and for data profiling
9. Evaluate definitions for clarity, completeness, and correctness
10. Leverage the Data Vault and enterprise data model for a successful

enterprise architecture.

Data Modeling Made Simple with erwin DM - Jeff Harris 2020-06-02

Master erwin DM to deliver robust and precise designs for both operational and analytical projects. Steve and Jeff start from the basics, explaining data modeling concepts and how to get up and running with erwin DM (erwin DM). Through a hands-on approach, business analysts, data professionals, and project managers will learn step-by-step how to build effective conceptual, logical, and physical data models. Complete the stages in identifying essential business requirements, designing the logical data model, transposing those logical modeling objects into physical tables and columns, and even generating the implementation database scripts. This book contains seven parts. Part I provides a foundation in data modeling and Part II a foundation in erwin DM. Part III covers the design layer technique and its application using erwin DM, distinguishing conceptual, logical, physical, and operational data models. Part IV covers entities, domains, attributes, key groups, validation rules, default rules, and subject areas, along with how to implement them using erwin DM. Part V explains the physical data model and how to convert a logical data model to a physical data model in erwin DM. Become confident creating tables, columns, indexes, and views. Part VI reveals advanced features available within erwin DM, including user defined properties, naming standards, forward engineering, reverse engineering, complete compare, report designer, and the bulk editor. Part VII explains several important tools to use in combination with erwin DM, including erwin DM NoSQL, erwin Data Catalog, and erwin Data Literacy.

Semantic Modeling for Data - Panos Alexopoulos 2020-08-19

What value does semantic data modeling offer? As an information architect or data science professional, let's say you have an abundance of the right data and the technology to extract business gold—but you still fail. The reason? Bad data semantics. In this practical and comprehensive field guide, author Panos Alexopoulos takes you on an eye-opening journey through semantic data modeling as applied in the real world. You'll learn how to master this craft to increase the usability and value of your data and applications. You'll also explore the pitfalls to avoid and dilemmas to overcome for building high-quality and valuable semantic representations of data. Understand the fundamental concepts, phenomena, and processes related to semantic data modeling Examine the quirks and challenges of semantic data modeling and learn how to effectively leverage the available frameworks and tools Avoid mistakes and bad practices that can undermine your efforts to create good data models Learn about model development dilemmas, including representation, expressiveness and content, development, and governance Organize and execute semantic data initiatives in your organization, tackling technical, strategic, and organizational challenges

Data Modeling Made Simple with ER/Studio Data Architect - Steve Hoberman 2015-11-06

Build a working knowledge of data modeling concepts and best practices, along with how to apply these principles with ER/Studio. This second edition includes numerous updates and new sections including an overview of ER/Studio's support for agile development, as well as a description of some of ER/Studio's newer features for NoSQL, such as MongoDB's containment structure.

Patterns of Data Modeling - Michael Blaha 2010-06-01

Best-selling author and database expert with more than 25 years of experience modeling application and enterprise data, Dr. Michael Blaha provides tried and tested data model patterns, to help readers avoid common modeling mistakes and unnecessary frustration on their way to building effective data models. Unlike the typical methodology book, Patterns of Data Modeling provides advanced techniques for those who have mastered the basics. Recognizing that database representation sets the path for software, determines its flexibility, affects its quality, and influences whether it succeeds or fails, the text focuses on databases rather than programming. It is one of the first books to apply the popular patterns perspective to database systems and data models. It offers practical

advice on the core aspects of applications and provides authoritative coverage of mathematical templates, antipatterns, archetypes, identity, canonical models, and relational database design.

The Data Warehouse Toolkit - Ralph Kimball 2011-08-08

This old edition was published in 2002. The current and final edition of this book is *The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling*, 3rd Edition which was published in 2013 under ISBN: 9781118530801. The authors begin with fundamental design recommendations and gradually progress step-by-step through increasingly complex scenarios. Clear-cut guidelines for designing dimensional models are illustrated using real-world data warehouse case studies drawn from a variety of business application areas and industries, including: Retail sales and e-commerce Inventory management Procurement Order management Customer relationship management (CRM) Human resources management Accounting Financial services Telecommunications and utilities Education Transportation Health care and insurance By the end of the book, you will have mastered the full range of powerful techniques for designing dimensional databases that are easy to understand and provide fast query response. You will also learn how to create an architected framework that integrates the distributed data warehouse using standardized dimensions and facts.

A Practical Guide to Database Design - Rex Hogan 2018-03-08

Fully updated and expanded from the previous edition, *A Practical Guide to Database Design*, Second Edition, is intended for those involved in the design or development of a database system or application. It begins by focusing on how to create a logical data model where data is stored "where it belongs." Next, data usage is reviewed to transform the logical model into a physical data model that will satisfy user performance requirements. Finally, it describes how to use various software tools to create user interfaces to review and update data in a database. Organized into 11 chapters, the book begins with an overview of the functionality of database management systems and how they guarantee the accuracy and availability of data. It then describes how to define and normalize data requirements to create a logical data model, then map them into an initial solution for a physical database. The book next presents how to use an industry-leading data modeling tool to define and manage logical and physical data models. After that, it describes how to implement a physical database using either Microsoft Access or SQL Server and how to use Microsoft Access to create windows interfaces to query or update data in tables. The last part of the book reviews software tools and explores the design and implementation of a database using as an example a much more complex data environment for a University. The book ends with a description of how to use PHP to build a web-based interface to review and update data in a database.

R for Data Science - Hadley Wickham 2016-12-12

Learn how to use R to turn raw data into insight, knowledge, and understanding. This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience, *R for Data Science* is designed to get you doing data science as quickly as possible. Authors Hadley Wickham and Garrett Grolemund guide you through the steps of importing, wrangling, exploring, and modeling your data and communicating the results. You'll get a complete, big-picture understanding of the data science cycle, along with basic tools you need to manage the details. Each section of the book is paired with exercises to help you practice what you've learned along the way. You'll learn how to: Wrangle—transform your datasets into a form convenient for analysis Program—learn powerful R tools for solving data problems with greater clarity and ease Explore—examine your data, generate hypotheses, and quickly test them Model—provide a low-dimensional summary that captures true "signals" in your dataset Communicate—learn R Markdown for integrating prose, code, and results

Logical Data Modeling - Alan Chmura 2004-09-29

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.

Hands-On Big Data Modeling - James Lee 2018-11-30

Solve all big data problems by learning how to create efficient data models Key Features Create effective models that get the most out of big data Apply your knowledge to datasets from Twitter and weather data to learn big data Tackle different data modeling challenges with expert techniques presented in this book Book Description Modeling and managing data is a central focus of all big data projects. In fact, a database is considered to be effective only if you have a logical and sophisticated data model. This book will help you develop practical skills in modeling your own big data projects and improve the performance of analytical queries for your specific business requirements. To start with, you'll get a quick introduction to big data and understand the different data modeling and data management platforms for big data. Then you'll work with structured and semi-structured data with the help of real-life examples. Once you've got to grips with the basics, you'll use the SQL Developer Data Modeler to create your own data models containing different file types such as CSV, XML, and JSON. You'll also learn to create graph data models and explore data modeling with streaming data using real-world datasets. By the end of this book, you'll be able to design and develop efficient data models for varying data sizes easily and efficiently. What you will learn Get insights into big data and discover various data models Explore conceptual, logical, and big data models Understand how to model data containing different file types Run through data modeling with examples of Twitter, Bitcoin, IMDB and weather data modeling Create data models such as Graph Data and Vector Space Model structured and unstructured data using Python and R Who this book is for This book is great for programmers, geologists, biologists, and every professional who deals with spatial data. If you want to learn how to handle GIS, GPS, and remote sensing data, then this book is for you. Basic knowledge of R and QGIS would be helpful.

Data Modeling Made Simple with Erwin DM - Harris Jeff 2020-06

The Data Modeling Handbook - Michael C. Reingruber 1994-12-17

This practical, field-tested reference doesn't just explain the characteristics of finished, high-quality data models--it shows readers exactly how to build one. It presents rules and best practices in several notations, including IDEFIX, Martin, Chen, and Finkelstein. The book offers dozens of real-world examples and go beyond basic theory to provide users with practical guidance.

Data Modeling Fundamentals - Paulraj Ponniah 2007-06-30

The purpose of this book is to provide a practical approach for IT professionals to acquire the necessary knowledge and expertise in data modeling to function effectively. It begins with an overview of basic data modeling concepts, introduces the methods and techniques, provides a comprehensive case study to present the details of the data model components, covers the implementation of the data model with emphasis on quality components, and concludes with a presentation of a realistic approach to data modeling. It clearly describes how a generic data model is created to represent truly the enterprise information requirements.

Mastering Data Modeling - John Carlis 2000-11-10

Data modeling is one of the most critical phases in the database application development process, but also the phase most likely to fail. A master data modeler must come into any organization, understand its data requirements, and skillfully model the data for applications that most effectively serve organizational needs. *Mastering Data Modeling* is a complete guide to becoming a successful data modeler. Featuring a requirements-driven approach, this book clearly explains fundamental concepts, introduces a user-oriented data modeling notation, and describes a rigorous, step-by-step process for collecting, modeling, and documenting the kinds of data that users need. Assuming no prior knowledge, *Mastering Data Modeling* sets forth several fundamental problems of data modeling, such as reconciling the software developer's demand for rigor with the users' equally valid need to speak their own (sometimes vague) natural language. In addition, it describes the good habits that help you respond to these fundamental problems. With these good habits in mind, the book describes the Logical Data Structure (LDS) notation and the process of controlled evolution by which you can create low-cost, user-approved data models that resist premature obsolescence. Also included is an encyclopedic analysis of all data shapes that you will encounter. Most notably, the book describes *The Flow*, a loosely scripted process by which you and the users gradually but continuously improve an LDS until it faithfully represents the information needs. Essential implementation and technology issues are also covered. You will learn about such vital topics as: The fundamental problems of data modeling The good habits that help a data modeler be effective and economical LDS notation, which encourages these good habits How to read an LDS aloud--in declarative English sentences How to write a well-formed (syntactically correct) LDS How to get users to name the parts of an LDS with words from their own business vocabulary How to visualize data for an LDS A catalog of LDS shapes that recur throughout all data models *The Flow*--the template for your conversations with users How to document an LDS for users, data modelers, and technologists How to map an LDS to a relational schema How LDS differs from other notations and why "Story interludes" appear throughout the book, illustrating real-world successes of the LDS notation and controlled evolution process. Numerous exercises help you master critical skills. In addition, two detailed, annotated sample conversations with users show you the process of controlled evolution in action.

Data Modeling Made Simple with PowerDesigner - Steve Hoberman 2011

This book will provide the business or IT professional with a practical working knowledge of data modelling concepts and best practices, and how to apply these principles with PowerDesigner. You will build many PowerDesigner data models along the way, increasing your skills in first the fundamentals and later in the book the more advanced features of PowerDesigner. The book contains six sections: Section I introduces data modelling along with its purpose and variations. Also included is an explanation of the important role of a data modelling tool, the key features required of any data modelling tool, and an introduction to the essential features of PowerDesigner; Section II explains all of the components on a data model including entities, data elements, relationships, and keys, and describes how to create and manage these objects in PowerDesigner. Also included is a discussion of the importance of quality names and definitions for your objects; Section III dives into the relational and dimensional subject area, logical, and physical data models, and describes how PowerDesigner supports these models and the connections between them. Learn how to get information into and out of PowerDesigner, and improve the quality of your data models with a cross-reference of key PowerDesigner features with the Data Model Scorecard; Section IV contains a PowerDesigner workshop designed to consolidate everything for you; Section V focuses on additional PowerDesigner features (some of which have already been introduced) which make life easier for data modellers; Section VI discusses PowerDesigner topics beyond data modelling, including the XML physical model and the other types of model available in PowerDesigner; it also discusses the role of PowerDesigner in data management, using the DAMA Data Management Body of Knowledge (DAMA-DMBOK)

framework.

Data Modeling Made Simple - Steve Hoberman 2015-12-29

Data Modeling Made Simple will provide the business or IT professional with a practical working knowledge of data modeling concepts and best practices. This book is written in a conversational style that encourages you to read it from start to finish and master these ten objectives: Know when a data model is needed and which type of data model is most effective for each situation Read a data model of any size and complexity with the same confidence as reading a book Build a fully normalized relational data model, as well as an easily navigatable dimensional model Apply techniques to turn a logical data model into an efficient physical design Leverage several templates to make requirements gathering more efficient and accurate Explain all ten categories of the Data Model Scorecard Learn strategies to improve your working relationships with others Appreciate the impact unstructured data has, and will have, on our data modeling deliverables Learn basic UML concepts Put data modeling in context with XML, metadata, and agile development **Book Review by Johnny Gay** In this book review, I address each section in the book and provide what I found most valuable as a data modeler. I compare, as I go, how the book's structure eases the new data modeler into the subject much like an instructor might ease a beginning swimmer into the pool. This book begins like a Dan Brown novel. It even starts out with the protagonist, our favorite data modeler, lost on a dark road somewhere in France. In this case, what saves him isn't a cipher, but of all things, something that's very much like a data model in the form of a map! The author deems they are both way-finding tools. The chapters in the book are divided into 5 sections. The chapters in each section end with an exercise and a list of the key points covered to reinforce what you've learned. I find myself comparing the teaching structure of the book to the way most of us learn to swim.

The Data Model Resource Book, Volume 1 - Len Silverston 2011-08-08

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.

Data Model Scorecard - Steve Hoberman 2015-11-01

Data models are the main medium used to communicate data requirements from business to IT, and within IT from analysts, modelers, and architects, to database designers and developers. Therefore it's essential to get the data model right. But how do you determine right? That's where the Data Model Scorecard® comes in. The Data Model Scorecard is a data model quality scoring tool containing ten categories aimed at improving the quality of your organization's data models. Many of my consulting assignments are dedicated to applying the Data Model Scorecard to my client's data models – I will show you how to apply the Scorecard in this book. This book, written for people who build, use, or review data models, contains the Data Model Scorecard template and an explanation along with many examples of each of the ten Scorecard categories. There are three sections: In Section I, *Data Modeling and the Need for Validation*, receive a short data modeling primer in Chapter 1, understand why it is important to get the data model right in Chapter 2, and learn about the Data Model Scorecard in Chapter 3. In

Section II, Data Model Scorecard Categories, we will explain each of the ten categories of the Data Model Scorecard. There are ten chapters in this section, each chapter dedicated to a specific Scorecard category: · Chapter 4: Correctness · Chapter 5: Completeness · Chapter 6: Scheme · Chapter 7: Structure · Chapter 8: Abstraction · Chapter 9: Standards · Chapter 10: Readability · Chapter 11: Definitions · Chapter 12: Consistency · Chapter 13: Data In Section III, Validating Data Models, we will prepare for the model review (Chapter 14), cover tips to help during the model review (Chapter 15), and then review a data model based upon an actual project (Chapter 16).

Data Modeling Made Simple with PowerDesigner - Steve Hoberman 2011-04-01

Data Modeling Made Simple with PowerDesigner will provide the business or IT professional with a practical working knowledge of data modeling concepts and best practices, and how to apply these principles with PowerDesigner. You'll build many PowerDesigner data models along the way, increasing your skills first with the fundamentals and later with more advanced feature of PowerDesigner. This book combines real-world experience and best practices to help you master the following ten objectives: This book has ten key objectives for you, the reader: 1. You will know when a data model is needed and which PowerDesigner models are the most appropriate for each situation 2. You will be able to read a data model of any size and complexity with the same confidence as reading a book 3. You will know when to apply and how to make use of all the key features of PowerDesigner 4. You will be able to build, step-by-step in PowerDesigner, a pyramid of linked data models, including a conceptual data model, a fully normalized relational data model, a physical data model, and an easily navigable dimensional model 5. You will be able to apply techniques such as indexing, transforms, and forward engineering to turn a logical data model into an efficient physical design 6. You will improve data governance and modeling consistency within your organization by leveraging features such as PowerDesigner's reference models, Glossary, domains, and model comparison and model mapping techniques 7. You will know how to utilize dependencies and traceability links to assess the impact of change 8. You will know how to integrate your PowerDesigner models with externally-managed files, including the import and export of data using Excel and Requirements documents 9. You will know where you can take advantage of the entire PowerDesigner model set, to increase the success rate of corporate-wide initiatives such as business intelligence and enterprise resource planning (ERP) 10. You will understand the key differentiators between PowerDesigner and other data modeling tools you may have used before This book contains seven sections: Section I introduces data modeling, along with its purpose and variations. Section II explains all of the components on a data model including entities, data elements, relationships, and keys. Also included is a discussion of the importance of quality names and definitions for your objects. Section III explains the important role of data modeling tools, the key features required of any data modeling tool, and an introduction to the essential features of PowerDesigner. It also describes how to create and manage data modeling objects in PowerDesigner. Section IV introduces the Data Model Pyramid, then dives into the relational and dimensional subject areas, logical, and physical data models, and describes how PowerDesigner supports these models and the connections between them. Section V guides you through the creation of your own Data Model Pyramid. Section VI focuses on additional PowerDesigner features (some of which have already been introduced) that make life easier for data modelers. Learn how to get information into and out of PowerDesigner, and improve the quality of your data models with a cross-reference of key PowerDesigner features with the Data Model Scorecard®. Section VII discusses PowerDesigner topics beyond data modeling, including the XML physical model and the other types of model available in PowerDesigner.

Object-Role Modeling Fundamentals - Terry Halpin 2015-04-15

Object-Role Modeling (ORM) is a fact-based approach to data modeling that expresses the information requirements of any business domain simply in terms of objects that play roles in relationships. All facts of interest are treated as instances of attribute-free structures known as fact types, where the relationship may be unary (e.g. Person

smokes), binary (e.g. Person was born on Date), ternary (e.g. Customer bought Product on Date), or longer. Fact types facilitate natural expression, are easy to populate with examples for validation purposes, and have greater semantic stability than attribute-based structures such as those used in Entity Relationship Modeling (ER) or the Unified Modeling Language (UML). All relevant facts, constraints and derivation rules are expressed in controlled natural language sentences that are intelligible to users in the business domain being modeled. This allows ORM data models to be validated by business domain experts who are unfamiliar with ORM's graphical notation. For the data modeler, ORM's graphical notation covers a much wider range of constraints than can be expressed in industrial ER or UML class diagrams, and thus allows rich visualization of the underlying semantics. Suitable for both novices and experienced practitioners, this book covers the fundamentals of the ORM approach. Written in easy-to-understand language, it shows how to design an ORM model, illustrating each step with simple examples. Each chapter ends with a practical lab that discusses how to use the freeware NORMA tool to enter ORM models and use it to automatically generate verbalizations of the model and map it to a relational database.

Agile Data Warehouse Design - Lawrence Corr 2011-04-16

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 Lawrence Corr 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.

Data Modeling Made Simple with CA ERwin Data Modeler r8 - Donna Burbank 2011-08-01

Data Modeling Made Simple with CA ERwin Data Modeler r8 will provide the business or IT professional with a practical working knowledge of data modeling concepts and best practices, and how to apply these principles with CA ERwin Data Modeler r8. You'll build many CA ERwin data models along the way, mastering first the fundamentals and later in the book the more advanced features of CA ERwin Data Modeler. This book combines real-world experience and best practices with down to earth advice, humor, and even cartoons to help you master the following ten objectives: 1. Understand the basics of data modeling and relational theory, and how to apply

these skills using CA ERwin Data Modeler 2. Read a data model of any size and complexity with the same confidence as reading a book 3. Understand the difference between conceptual, logical, and physical models, and how to effectively build these models using CA ERwin's Data Modelers Design Layer Architecture 4. Apply techniques to turn a logical data model into an efficient physical design and vice-versa through forward and reverse engineering, for both 'top down' and bottom-up design 5. Learn how to create reusable domains, naming standards, UDPs, and model templates in CA ERwin Data Modeler to reduce modeling time, improve data quality, and increase enterprise consistency 6. Share data model information with various audiences using model formatting and layout techniques, reporting, and metadata exchange 7. Use the new workspace customization features in CA ERwin Data Modeler r8 to create a workflow suited to your own individual needs 8. Leverage the new Bulk Editing features in CA ERwin Data Modeler r8 for mass metadata updates, as well as import/export with Microsoft Excel 9. Compare and merge model changes using CA ERwin Data Modelers Complete Compare features 10. Optimize the organization and layout of your data models through the use of Subject Areas, Diagrams, Display Themes, and more Section I provides an overview of data modeling: what it is, and why it is needed. The basic features of CA ERwin Data Modeler are introduced with a simple, easy-to-follow example. Section II introduces the basic building blocks of a data model, including entities, relationships, keys, and more. How-to examples using CA ERwin Data Modeler are provided for each of these building blocks, as well as 'real world' scenarios for context. Section III covers the creation of reusable standards, and their importance in the organization. From standard data modeling constructs such as domains to CA ERwin-specific features such as UDPs, this section covers step-by-step examples of how to create these standards in CA ERwin Data Modeling, from creation, to template building, to sharing standards with end users through reporting and queries. Section IV discusses conceptual, logical, and physical data models, and provides a comprehensive case study using CA ERwin Data Modeler to show the interrelationships between these models using CA ERwin's Design Layer Architecture. Real world examples are provided from requirements gathering, to working with business sponsors, to the hands-on nitty-gritty details of building conceptual, logical, and physical data models with CA ERwin Data Modeler r8. From the Foreword by Tom Bilcze, President, CA Technologies Modeling Global User Community: Data Modeling Made Simple with CA ERwin Data Modeler r8 is an excellent resource for the ERwin community. The data modeling community is a diverse collection of data professionals with many perspectives of data modeling and different levels of skill and experience. Steve Hoberman and Donna Burbank guide newbie modelers through the basics of data modeling and CA ERwin r8. Through the liberal use of illustrations, the inexperienced data modeler is graphically walked through the components of data models and how to create them in CA ERwin r8. As an experienced data modeler, Steve and Donna give me a handbook for effectively using the new and enhanced features of this release to bring my art form to life. The book delves into advanced modeling topics and techniques by continuing the liberal use of illustrations. It speaks to the importance of a defined data modeling architecture with soundly modeled data to assist the enterprise in understanding of the value of data. It guides me in applying the finishing touches to my data designs.

Data Modeling Master Class Training Manual 6th Edition - Steve Hoberman 2015-09-01

This is the 6th edition of the training manual for the Data Modeling Master Class that Steve Hoberman teaches onsite and through public classes. This text can be purchased prior to attending the Master Class, the latest course schedule and detailed description can be found on Steve Hoberman's website, stevhoberman.com. The Master Class is a complete data modeling course, containing three days of practical techniques for producing conceptual, logical, and physical relational and dimensional and NoSQL data models. After learning the styles and steps in capturing and modeling requirements, you will apply a best practices approach to building and validating data models through the Data Model Scorecard®. You will know not just how to build a data model, but how to build a

data model well. Two case studies and many exercises reinforce the material and will enable you to apply these techniques in your current projects. TOP 10 OBJECTIVES: Explain data modeling components and identify them on your projects by following a question-driven approach; Demonstrate reading a data model of any size and complexity with the same confidence as reading a book; Validate any data model with key settings (scope, abstraction, timeframe, function, and format) as well as through the Data Model Scorecard®; Apply requirements elicitation techniques including interviewing, artifact analysis, prototyping, and job shadowing; Build relational and dimensional conceptual and logical data models, and know the tradeoffs on the physical side for both RDBMS and NoSQL solutions; Practice finding structural soundness issues and standards violations; Recognize when to use abstraction and where patterns and industry data models can give us a great head start; Use a series of templates for capturing and validating requirements, and for data profiling; Evaluate definitions for clarity, completeness, and correctness; Leverage the Data Vault and enterprise data model for a successful enterprise architecture.

Data Modeling Made Simple - Steve Hoberman 2013

Data Modeling Made Simple with ER/Studio Data Architect will provide the business or IT professional with a practical working knowledge of data modeling concepts and best practices, along with how to apply these principles with ER/Studio. You'll build many ER/Studio data models along the way, applying best practices to master these ten objectives: 1. You will know why a data model is needed and which ER/Studio models are the most appropriate for each situation 2. You will be able to read a data model of any size and complexity with the same confidence as reading a book 3. You will know how to apply all the key features of ER/Studio 4. You will be able to build relational and dimensional conceptual, logical, and physical data models in ER/Studio 5. You will be able to apply techniques such as indexing, transforms, and forward engineering to turn a logical data model into an efficient physical design 6. You will improve data model quality and impact analysis results by leveraging ER/Studio's lineage functionality and compare/merge utility 7. You will achieve enterprise architecture through ER/Studio's repository and portal functionality 8. You will be able to apply ER/Studio's data dictionary features 9. You will learn ways of sharing the data model through reporting and through exporting the model in a variety of formats 10. You will leverage ER/Studio's naming functionality to improve naming consistency This book contains four sections: Section I introduces data modeling and the ER/Studio landscape. Learn why data modeling is so critical to software development and even more importantly, why data modeling is so critical to understanding the business. You will also learn about the ER/Studio environment. By the end of this section, you will have created and saved your first data model in ER/Studio and be ready to start modeling in Section II! Section II explains all of the symbols and text on a data model, including entities, attributes, relationships, domains, and keys. By the time you finish this section, you will be able to 'read' a data model of any size or complexity, and create a complete data model in ER/Studio. Section III explores the three different levels of models: conceptual, logical, and physical. A conceptual data model (CDM) represents a business need within a defined scope. The logical data model (LDM) represents a detailed business solution, capturing the business requirements without complicating the model with implementation concerns such as software and hardware. The physical data model (PDM) represents a detailed technical solution. The PDM is the logical data model compromised often to improve performance or usability. The PDM makes up for deficiencies in our technology. By the end of this section you will be able to create conceptual, logical, and physical data models in ER/Studio. Section IV discusses additional features of ER/Studio. These features include data dictionary, data lineage, automating tasks, repository and portal, exporting and reporting, naming standards, and compare and merge functionality.

The Data Model Toolkit - Dave Knifton 2016-10-10

Adopting the latest technological and data related innovations has caused many organisations to realise they don't have a firm grasp on their basic operational data. This is a problem that Logical Data Models are uniquely qualified

to help them solve. The realisation of the need to define a Logical Data Model may be driven by any number of reasons including; trying to link Big Data Analytics to operational data, plunging into Digital Marketing, choosing the best SaaS solution, carrying out a core Data Migration, developing a Data Warehouse, enhancing Data Governance processes, or even just trying to get everyone to agree on their Product specifications! This book will provide you with the skills required to start to answer these and many similar types of questions. It is not written with a focus on IT development, so you don't need a technical background to get the most from it. But for any professional working in an organisation's data landscape, this book will provide the skills they need to define high quality and beneficial data models quickly and easily. It does this using a wealth of practical examples, tips and techniques, as well as providing checklists and templates. It is structured into three parts: The Foundations: What are the solid foundations necessary for building effective data models? The Tools: What Tools are required to enable you to specify clear, precise and accurate data model definitions? The Deliverables: What processes will you need to successfully define the models, what will they deliver, and how can we make them beneficial to the organisation? "In this data-rich era, it is even more critical for organisations to answer the question of what their data means and the value it can bring. Those who can, will gain a competitive advantage through their use of data to streamline their operations and energise their strategies. Core to revealing this meaning, is the data model that is now, more than ever, the lynchpin of success. The Data Model Toolkit provides the essential knowledge and skills that will ensure this success." – Reem Zahran, Global IT Platform Director, TNS "We work with many enterprise customers to help them transform their technology and it always starts with data. The key is a clear definition of their data quality, completeness and governance. This book shows you step by step how to define and use Data Models as powerful tools to define an organisation's data and maximise its business benefit." – John Casserly, CEO, Xceed Group

Data Modeling Master Class Training Manual 5th Edition - Steve Hoberman 2014

This is the fifth edition of the training manual for the Data Modeling Master Class that Steve Hoberman teaches onsite and through public classes. This text can be purchased prior to attending the Master Class, the latest course schedule and detailed description can be found on Steve Hoberman's website, stevehoberman.com. The Master Class is a complete data modeling course, containing three days of practical techniques for producing conceptual, logical, and physical relational and dimensional and NoSQL data models. After learning the styles and steps in capturing and modeling requirements, you will apply a best practices approach to building and validating data models through the Data Model Scorecard®. You will know not just how to build a data model, but how to build a data model well. Two case studies and many exercises reinforce the material and will enable you to apply these techniques in your current projects.

Data Modeling for MongoDB - Steve Hoberman 2014-06-01

Congratulations! You completed the MongoDB application within the given tight timeframe and there is a party to celebrate your application's release into production. Although people are congratulating you at the celebration, you are feeling some uneasiness inside. To complete the project on time required making a lot of assumptions about the data, such as what terms meant and how calculations are derived. In addition, the poor documentation about the application will be of limited use to the support team, and not investigating all of the inherent rules in the data may eventually lead to poorly-performing structures in the not-so-distant future. Now, what if you had a time machine and could go back and read this book. You would learn that even NoSQL databases like MongoDB require some level of data modeling. Data modeling is the process of learning about the data, and regardless of technology, this process must be performed for a successful application. You would learn the value of conceptual, logical, and physical data modeling and how each stage increases our knowledge of the data and reduces assumptions and poor design decisions. Read this book to learn how to do data modeling for MongoDB applications, and accomplish these

five objectives: Understand how data modeling contributes to the process of learning about the data, and is, therefore, a required technique, even when the resulting database is not relational. That is, NoSQL does not mean NoDataModeling! Know how NoSQL databases differ from traditional relational databases, and where MongoDB fits. Explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts, and learn the basics of adding, querying, updating, and deleting data in MongoDB. Practice a streamlined, template-driven approach to performing conceptual, logical, and physical data modeling. Recognize that data modeling does not always have to lead to traditional data models! Distinguish top-down from bottom-up development approaches and complete a top-down case study which ties all of the modeling techniques together. This book is written for anyone who is working with, or will be working with MongoDB, including business analysts, data modelers, database administrators, developers, project managers, and data scientists. There are three sections: In Section I, Getting Started, we will reveal the power of data modeling and the tight connections to data models that exist when designing any type of database (Chapter 1), compare NoSQL with traditional relational databases and where MongoDB fits (Chapter 2), explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts (Chapter 3), and explain the basics of adding, querying, updating, and deleting data in MongoDB (Chapter 4). In Section II, Levels of Granularity, we cover Conceptual Data Modeling (Chapter 5), Logical Data Modeling (Chapter 6), and Physical Data Modeling (Chapter 7). Notice the "ing" at the end of each of these chapters. We focus on the process of building each of these models, which is where we gain essential business knowledge. In Section III, Case Study, we will explain both top down and bottom up development approaches and go through a top down case study where we start with business requirements and end with the MongoDB database. This case study will tie together all of the techniques in the previous seven chapters. Nike Senior Data Architect Ryan Smith wrote the foreword. Key points are included at the end of each chapter as a way to reinforce concepts. In addition, this book is loaded with hands-on exercises, along with their answers provided in Appendix A. Appendix B contains all of the book's references and Appendix C contains a glossary of the terms used throughout the text.

Data Modeling Made Simple with CA ERwin Data Modeler R8 - Donna Burbank 2011

Learn how to do data modeling using CA ERwin Data Modeler r8!

Hadoop Application Architectures - Mark Grover 2015-06-30

Get expert guidance on architecting end-to-end data management solutions with Apache Hadoop. While many sources explain how to use various components in the Hadoop ecosystem, this practical book takes you through architectural considerations necessary to tie those components together into a complete tailored application, based on your particular use case. To reinforce those lessons, the book's second section provides detailed examples of architectures used in some of the most commonly found Hadoop applications. Whether you're designing a new Hadoop application, or planning to integrate Hadoop into your existing data infrastructure, Hadoop Application Architectures will skillfully guide you through the process. This book covers: Factors to consider when using Hadoop to store and model data Best practices for moving data in and out of the system Data processing frameworks, including MapReduce, Spark, and Hive Common Hadoop processing patterns, such as removing duplicate records and using windowing analytics Giraph, GraphX, and other tools for large graph processing on Hadoop Using workflow orchestration and scheduling tools such as Apache Oozie Near-real-time stream processing with Apache Storm, Apache Spark Streaming, and Apache Flume Architecture examples for clickstream analysis, fraud detection, and data warehousing

The Data Model Resource Book - Len Silverston 2009-01-09

This third volume of the best-selling "Data Model Resource Book" series revolutionizes the data modeling discipline by answering the question "How can you save significant time while improving the quality of any type

of data modeling effort?" In contrast to the first two volumes, this new volume focuses on the fundamental, underlying patterns that affect over 50 percent of most data modeling efforts. These patterns can be used to

considerably reduce modeling time and cost, to jump-start data modeling efforts, as standards and guidelines to increase data model consistency and quality, and as an objective source against which an enterprise can evaluate data models.