Introduction To Object Relational Database Development

Arguably the most capable of all the open source databases, PostgreSQL is an object-relational database management system first developed in 1977 by the University of California at Berkeley. In spite of its long history, this robust database suffers from a lack of easy-to-use documentation. Practical PostgreSQL fills that void with a fast-paced guide to installation, configuration, and usage. This comprehensive new volume shows you how to compile PostgreSQL from source, create a database, and configure PostgreSQL to accept client-server connections. It also covers the many advanced features, such as transactions, versioning, replication, and referential integrity that enable developers and DBAs to use PostgreSQL for serious business applications. The thorough introduction to PostgreSQL's PL/pgSQL programming language explains how you can use this very useful but under-documented feature to develop stored procedures and triggers. The book includes a complete command reference, and database administrators will appreciate the chapters on user management, database maintenance, and backup & recovery. With Practical PostgreSQL, you will discover quickly why this open source database is such a great open source alternative to proprietary products from Oracle, IBM, and Microsoft.

Fully revised and updated, Relational Database Design, Second Edition is the most lucid and effective introduction to relational database design available. Here, you'll find the conceptual and practical information you need to develop a design that ensures data accuracy and user satisfaction while optimizing performance, regardless of your experience level or choice of DBMS. Supporting the book's step-by-step instruction are three case studies illustrating the planning, analysis, and design steps involved in arriving at a sound design. These real-world examples include object-relational design techniques, which are addressed in greater detail in a new chapter devoted entirely to this timely subject. * Concepts you need to master to put the book's practical instruction to work. * Methods for tailoring your design to the environment in which the database will run and the uses to which it will be put. * Design approaches that ensure data accuracy and consistency. * Examples of how design can inhibit or boost database application performance. * Object-relational design techniques, benefits, and examples. * Instructions on how to choose and use a normalization technique. * Guidelines for understanding and applying Codd's rules. * Tools to implement a relational design using SQL. * Techniques for using CASE tools for database design.

Fundamentals of Object DatabasesObject-Oriented and Object-Relational DesignMorgan & Claypool Publishers

This volume contains the proceedings of the Third International Conference on Deductive and Object-Oriented Databases. Its central tenet is that the object-oriented and deductive paradigms for modeling, organizing, and processing data complement each other, rather than competing, and that problems involving massive volumes of complex data can best be solved by integrating the best of both approaches. Central questions in the area are: - How do we design a tool that presents the best of the object-oriented and declarative ideas? - How can the users of this tool express their problems in a combination of declarative and procedural features? The volume includes 29 papers that contribute towards answering these questions.

Relational Database Design Clearly Explained

Fundamentals of Relational Database Management Systems

Readings in Object-oriented Database Systems

Introduction to Object-Oriented Databases

This book provides an authoritative overview of the global development of surgical paediatrics. Biographical accounts of key people who developed this relatively new specialty, many of whom are now household names, are presented. The compendium also acknowledges the enormous contribution of imaging (ultrasound/MRI and PET scans), minimal invasive surgery, and fetal surgery, as well as the role of related journals and associations, in the progress of surgical paediatrics.Many of the contributors have been instrumental to the development of surgical paediatrics in their respective countries, and have considerable worldwide influence on the management of children requiring surgical care. Through their valuable insight and first-hand experience, this book not only shines a light on the past achievements of previous generations of paediatric surgeons, but also serves as a model to encourage future generations to do likewise.

Object-oriented databases were originally developed as an alternative to relational database technology for the representation, storage, and access of non-traditional data forms that were increasingly found in advanced applications of database technology. After much debate regarding object-oriented versus relational database technology, object-oriented extensions were eventually incorporated into relational technology to create object-relational databases. Both object-oriented databases and object-relational databases, collectively known as object databases, provide inherent support for object features, such as object identity, classes, inheritance hierarchies, and associations between classes using object references. This monograph presents the fundamentals of object databases, with a specific focus on conceptual modeling of object database designs. After an introduction to the fundamental concepts of object-oriented data, the monograph provides a review of object-oriented conceptual modeling techniques using side-by-side Enhanced Entity Relationship diagrams and Unified Modeling Language conceptual class diagrams that feature class hierarchies with specialization constraints and object associations. These object-oriented conceptual models provide the basis for introducing case studies that illustrate the use of object features within the design of object-oriented and object-relational databases. For the object-oriented database perspective, the Object Data Management Group data definition language provides a portable, language-independent specification of an object schema, together with an SQL-like object query language. LINQ (Language INtegrated Query) is presented as a case study of an object query language together with its use in the db4o open-source object-oriented database. For the object-relational perspective, the object-relational features of the SQL standard are presented together with an accompanying case

study of the object-relational features of Oracle. For completeness of coverage, an appendix provides a mapping of object-oriented conceptual designs to the relational model and its associated constraints. Table of Contents: List of Figures / List of Tables / Introduction to Object Databases / Object-Oriented Databases / Object-Relational Databases

Provides a simple, concise introduction to object-oriented database systems, with emphasis on their use as an enabling technology for supporting large scale software development.

Written by ODGM's C++ representative, this pragmatic guidebook is the first comprehensive introduction to programming object-oriented databases with OQL. It offers comparisons with SQL, with which readers are already familiar, as a bridge to understanding OQL and as a means of contrasting object-oriented versus relational database development.

A Guide to Object/relational Technology

Deductive and Object-Oriented Databases

SQL Clearly Explained

Object Data Management

Object-oriented Oracle

Addressing important extensions of the relational database model, including deductive, temporal, and object-oriented databases, this book provides an overview of database modeling with the Entity-Relationship (ER) model and the relational model. The book focuses on the primary achievements in relational database theory, including query languages, integrity constraints, database design, computable queries, and concurrency control. This reference will shed light on the ideas underlying relational database systems and the problems that confront database designers and researchers.

"The book covers comprehensive and fundamental aspects of the implementation of object-oriented modeling in a DBMS that was originated as a pure Relational Database, Oracle"--Provided by publisher.

This title is now out of print This revised introduction to object-oriented and extended relational database systems incorporates significant developments in the field since the first edition was published. As before, the book objectively examines the nature and benefits of these systems, compares them with conventional systems, and shows the range of applications they now make possible. With database technology and its uses developing so rapidly, it is not surprising that additional and updated information is required just two years after the book's initial and well-received publication. A key motivation for this revision is the need for database designers and users to understand important developments in object data management standards. When this book was first published, the lack of standards was a critical obstacle to widespread acceptance of the technology. In response to the advances made on the ODMG-93 standard (by a committee chaired by the author), as well as the SQL3 standard, a chapter has been added to the book that describes the new standards and explains their significance. One of the most significant features of the first edition was an appendix covering available products and prototypes. This appendix, expanded and updated here, offers an excellent single resource for people needing to know what systems are currently available. Major systems are now covered more extensively. The author has taken the opportunity to make improvements throughout the book. Recent work in a number of areas is described. New figures and examples have been created, and the notation in the data schema figures has been enhanced. The annotated bibliography has been expanded. Additions and clarifications appear in every chapter. Since initial publication, a number of books has appeared with "object- oriented databases" in the title. Cattell's work, however, remains the most thorough and most balanced coverage of the new technology, and it is now the most current, as well. His book discusses a much wider range of database approaches, including extended relational systems and object-oriented systems. It also provides deeper insight into the implementation and architecture of these systems. Any database system user interested in the latest technologies, particularly users with large amounts of complex data to manage, as well as students, designers, and implementors of such systems, will find this book packed with useful information. 0201547481B04062001

Written from a software engineering perspective, this book shows programmers & developers how to build object-oriented database applications for distributed & client/server environments using the newest update of the OMT methodology & UML.

Object-relational Database Development

An Introduction to Relational Database Theory

A Practical Introduction

Third International Conference, DOOD '93, Phoenix, Arizona, USA, December 6-8, 1993. Proceedings

Object-oriented Database Design Clearly Explained

The authors have revised and updated this bestseller to include both the Oracle8i and new Oracle9i Internet-savvy database products.

This is the second edition of the popular practitioner's guide to SQL, the industry-standard database query language. Like most computer languages, SQL can be overwhelming when you first see it, but for years readers have relied on this book to clear the confusion and explain how SQL works and how to use it effectively. Packed with tips, tricks, and good information, SQL Clearly Explained, Second Edition teaches database users and programmers everything they need to know to get their job done including · formulating SQL queries, · understanding how queries are processed by the DBMS, · maximizing performance, · using SQL to enter, modify, or delete data, · creating and maintaining database structural elements, and · embedding SQL in applications. Features · Updated and expanded to include changes in the SQL standard (SQL:1999) as well as recently implemented aspects of SQL-92. · Includes CD with examples from the book as well as MySQL, a popular open-source DBMS, on which the examples are based. · Web enhanced with extra features available online at www.mkp.com. * Second edition of classic SQL handbook * Updated to cover changes in the SQL language standard (SQL:1999) * Includes CD with MySQL software

Discover why object-relational technology is ideal for supporting a broad spectrum of data types and application areas, from financial services to multimedia data. In this completely revised and updated edition, database experts Michael Stonebraker and Paul Brown explore the object-relational paradigm and examine the most recent developments in the field. Specifically written for database application programmers, database analysts, and IT managers, this book includes detailed information on how to classify DBMS applications, where object-relational DBMSs fit in the database world, and what mechanisms are required to support such an engine. * Offers completely updated and expanded information" new and revised material discusses both the latest technology and the latest products. * Presents a simple matrix for classifying and evaluating DBMSs so that you can make informed judgments about object-relational systems. * Includes examples, tables, and tests to help you judge the quality and optimization of systems now on the market.

Combines language tutorials with application design advice to cover the PHP server-side scripting language and the MySQL database engine.

Object-oriented Modeling and Design for Database Applications

Database Systems For Advanced Applications '91 - Proceedings Of The 2nd International Symposium On Database Systems For Advanced Applications

Relational Database Design and Implementation

Object-oriented and Extended Relational Database Systems

Tracking the Next Great Wave

This book provides comprehensive coverage of fundamentals of database management system. It contains a detailed description on Relational Database Management System Concepts. There are a variety of solved examples and review questions with solutions. This book is for those who require a better understanding of relational data modeling, its purpose, its nature, and the standards used in creating relational data model.

Take a tour with leading researchers and developers for a practical look at object databases. Whether you currently work with or are thinking of moving to object databases, Chaudhri and Zicari provide a collection of real-world case studies and examples that demonstrate how some of the world's leading companies and research institutions are leveraging Java, XML, and Object Relational Systems to build robust databases. Starting with a comprehensive introduction to object and object-relational databases, the book then offers detailed discussions on some of the latest topics in the field such as JDBC and SQLJ support in relational databases and database modeling using UML. You'll also learn about object-to-relational mapping tools, architectural issues that influence performance, and the issues of complexity and scale.How popular tools from Computer Associates, eXcelon, GemStone, Objectivity, Oracle, Versant, and Poet were used in the case studies is also discussed.The companion Web site atwww.wiley.com/compbooks/chaudhri includes links to object-oriented database software applications and additional resources. Visit our Web site at www.wiley.com/compbooks/Visit the companion Web site at www.wiley.com/compbooks/chaudhri

Nowadays, newly developed software is often already obsolete by the time it is introduced. The object-oriented concept provides a solution to this "crisis," by allowing objects to be used in a wide range of programs. Object-oriented applications development with databases places special demands on the DBMS and the development environment. This book provides a detailed description of the object model of the Cach post-relational database. In addition, the reader is guided step-by-step through the development of a post-relational application. The accompanying CD-ROM contains the associated Windows software.

Discover the fundamental concepts of object-relational mapping (ORM) design, Aurelius basic features, and the practical applications of those features. In a series of tasks, you will be exposed to techniques and best practices that make the use of Aurelius easy and efficient. Furthermore, you'll refine your analytical skills to sharpen your understanding of Delphi (Pascal), helping you write better code along the way. Introducing Delphi ORM explains that while database design is difficult, database programming (i.e., manipulating, extracting, filtering, and manipulating data) is even more difficult. ORM frameworks provide a simpler way for you to access and manage data in databases. You'll see how they offer different levels of abstraction and tools to code data access in a database-agnostic way by introducing a layer between the application and the data access language (SQL, LINQ, and so on). By the end of the book, you will be confident in using a wide range of Aurelius features to allow you to get started with databases in a very short space of time. What You Will Learn Gain the fundamentals of ORM frameworks and Aurelius for Delphi Achieve basic tasks, such as connecting to the database and adding, deleting, and updating records, using Aurelius Employ advanced database queries Use the TAureliusDataSet component Integrate with mobile platforms such as Android and iOS Work with the data modeler application Who This Book Is For Software developers starting with Aurelius or those who have some exposure to the framework.

Oracle PL/SQL Programming

From Conceptual Analysis to Logical Design

Concise Guide to Databases

From Relational to Object-oriented Systems

Fundamentals of Object Databases

This text provides a thorough and systematic introduction to object-oriented databases. It begins by providing a survey of the main features of the relational model and relational systems, showing the limitations of this approach for the new applications now required. The authors explain the techniques which can be used to implement object-oriented systems and contains examples and exercises.

This book provides a solid grounding in the foundations of database technology and gives some ideas of how the field is likely to develop in the future. Emphasizing insight and

understanding rather than formalisms, Chris Date has divided the book into six parts: Basic Concepts, The Relational Model, Database Design, Transaction Management, Further Topics, and Object and Object/Relational Databases. This comprehensive introduction to databases reflects the latest developments and advances in the field of database systems. Throughout the book, there are numerous worked examples and exercises for the reader--with answers--as well as an extensive set of annotated references.

This monograph presents the fundamentals of object databases, with a specific focus on conceptual modeling of object database designs. After an introduction to the fundamental concepts of object-oriented data, the monograph provides a review of object-oriented conceptual modeling techniques using side-by-side Enhanced Entity Relationship diagrams and Unified Modeling Language conceptual class diagrams that feature class hierarchies with specialization constraints and object associations. These object-oriented conceptual models provide the basis for introducing case studies that illustrate the use of object features within the design of object-oriented and object-relational databases. For the object-oriented database perspective, the Object Data Management Group data definition language provides a portable, language-independent specification of an object schema, together with an SQL-like object query language. LINQ (Language INtegrated Query) is presented as a case study of an object query language together with its use in the db4o open-source object-oriented database. For the object-relational perspective, the object-relational features of the SQL standard are presented together with an accompanying case study of the object-relational features of Oracle. For completeness of coverage, an appendix provides a mapping of object-oriented conceptual designs to the relational model and its associated constraints."--P. [4] of cover.

Nowadays, newly developed software packages are often obsolete already at the time of their introduction. Object-oriented software development is a possible—if not the only—solution to this dilemma: applications are modeled as software objects that describe the properties and the behavior of real-world entities. Such objects are encapsulated, in that they hide—behind a publicly known interface—the complexity of their internal data structures and behaviors. This enables objects to be used in a wide range of program packages without needing to know the details of their internal implementation. Linking object-oriented modeled applications with a database places special demands on a database management system and development environment when the usual performance and semantics losses are to be avoided. This book provides a detailed description of the object model of the Caché postrelational database. This second, revised and expanded edition includes the many new features of Caché 5. There is a comprehensive description of the new Caché Studio with its improvements for developing and debugging applications as well as a whole new chapter about XML and SOAP based Web Services. The chapters about Java, ActiveX and the SQL manager have undergone a complete revision.

Object Relational Mapping Using TMS Aurelius

Concepts, Design and Applications

A Practical Look at Today's Implementations with Java and XML

Wiley Pathways Introduction to Database Management

A Guided Tour of Relational Databases and Beyond

Information Modeling and Relational Databases provides an introduction to ORM (Object Role Modeling)-and much more. In fact, it's the only book to go beyond introductory coverage and provide all of the in-depth instruction you need to transform knowledge from domain experts into a sound database design. Inside, ORM authority Terry Halpin blends conceptual information with practical instruction that will let you begin using ORM effectively as soon as possible. Supported by examples, exercises, and useful background information, his step-by-step approach teaches you to develop a natural-language-based ORM model and then, where needed, abstract ER and UML models from it. This book will quickly make you proficient in the modeling technique that is proving vital to the development of accurate and efficient databases that best meet real business objectives. The most in-depth coverage of Object Role Modeling available anywhere-written by a pioneer in the development of ORM. Provides additional coverage of Entity Relationship (ER) modeling and the Unified Modeling Language-all from an ORM perspective. Intended for anyone with a stake in the accuracy and efficacy of databases: systems analysts, information modelers, database designers and administrators, instructors, managers, and programmers. Explains and illustrates required concepts from mathematics and set theory.

This easy-to-read textbook/reference presents a comprehensive introduction to databases, opening with a concise history of databases and of data as an organisational asset. As relational database management systems are no longer the only database solution, the book takes a wider view of database technology, encompassing big data, NoSQL, object and object-relational and in-memory databases. The text also examines the issues of scalability, availability, performance and security encountered when building and running a database in the real world. Topics and features: presents review and discussion questions at the end of each chapter, in addition to skill-building, hands-on exercises; introduces the fundamental concepts and technologies in database systems, placing these in an historic context; describes the challenges faced by database professionals; reviews the use of a variety of database types in business environments; discusses areas for further research within this fast-moving domain.

This text provides a detailed description of OR (Object-Relational) database management systems and how to use this technology to build modern information systems.

Object-oriented database management systems are growing in popularity, thanks to changing corporate needs and the emergence of several viable products. However, while most database professionals have had at least some exposure to the basic concepts of object-oriented programming, information relating specifically to object-oriented databases has remained hard to come by. Object-Oriented Database Design Clearly Explained remedies this, providing developers and administrators with a ground-up understanding of the logical design of object-oriented databases. Focusing on the principles of the object paradigm while noting the particularities of specific products, this book will give readers the know-how required to produce effective designs in any environment. Key Features * Equips the reader with a sound understanding of the object paradigm and all key concepts, illustrating its points with three in-depth case * Presents product- and platform-neutral guidelines and advice, teaching readers the underlying object-oriented design principles they will need to apply regardless of the specific technology adopted * Details today's OODBMS standards and the variety of approaches taken by current products * Serves as a companion volume to Relational Database Design Clearly Explained, providing parallel examples that help to clarify relational and object-oriented data models

Object-Oriented and Object-Relational Design

Succeeding with Object Databases
Object-Oriented Application Development Using the Caché Postrelational Database
An Introduction to Object-oriented Databases
Applications in Software Engineering

An easy-to-read, concise introduction to the technology, written for IT management and database professionals, especially those who have interest in introducing object-relational technology and universal databases into the company.

Relational Database Design and Implementation: Clearly Explained, Fourth Edition, provides the conceptual and practical information necessary to develop a database design and management scheme that ensures data accuracy and user satisfaction while optimizing performance. Database systems underlie the large majority of business information systems. Most of those in use today are based on the relational data model, a way of representing data and data relationships using only two-dimensional tables. This book covers relational database theory as well as providing a solid introduction to SQL, the international standard for the relational database data manipulation language. The book begins by reviewing basic concepts of databases and database design, then turns to creating, populating, and retrieving data using SQL. Topics such as the relational data model, normalization, data entities, and Codd's Rules (and why they are important) are covered clearly and concisely. In addition, the book looks at the impact of big data on relational databases and the option of using NoSQL databases for that purpose. Features updated and expanded coverage of SQL and new material on big data, cloud computing, and object-relational databases Presents design approaches that ensure data accuracy and consistency and help boost performance Includes three case studies, each illustrating a different database design challenge Reviews the basic concepts of databases and database design, then turns to creating, populating, and retrieving data using SQL

Fundamentals of objet-oriented databases; Object-oriented fundamentals; Semantic data models and persistent languages; Object-oriented database systems; Implementation; Transaction processing; Special features; Relational extensions and extensible databases; Interfaces; Applications.

You can get there Where do you want to go? You might already be working in the information technology field and may be looking to expand your skills. You might be setting out on a new career path. Or, you might want to learn more about exciting opportunities in database management. Wherever you want to go, Introduction to Databases will help you get there. Easy-to-read, practical, and up-to-date, this text not only helps you learn fundamental database design and management concepts, it also helps you master the core competencies and skills you need to succeed in the classroom and in the real world. The book's brief, modular format and variety of built-in learning resources enable you to learn at your own pace and focus your studies. With this book, you will be able to: * Appreciate the key role of data in daily business operations and strategic decisions. * Understand databases, database management systems, and SQL, the software on which they are based, from the ground up. * Know how to gather and organize critical business information, design a database based on this information, and retrieve and modify that information in a useful manner. * Use accepted data modeling procedures to design a relational database. * Master the concept of data normalization and the use of standard normalization rules. * Explore critical real-world issues including application integration and securing data against disclosure and loss. Wiley Pathways helps you achieve your goals Not every student is on the same path, but every student wants to succeed. The Information Technology series in the new Wiley Pathways imprint helps you achieve your goals. The books in this series--Introduction to Databases, Introduction to Programming Using Visual Basic, Introduction to Operating Systems, Networking Basics, Windows Network Administration, Network Security Fundamentals, and PC Hardware Essentials--offer a coordinated information technology curriculum. Learn more at www.wiley.com/go/pathways

Introducing Delphi ORM
Web Database Applications with PHP and MySQL
Object-relational DBMSs
An Introduction to Database Systems
Universal Database Management

Presents an overview of how to use object-oriented (OO) technology to improve existing relational databases.

Introduction to Object-Oriented Databases provides the first unified and coherent presentation of the essential concepts and techniques of object-oriented databases. It consolidates the results of research and development in the semantics and implementation of a full spectrum of database facilities for object-oriented systems, including data model, query, authorization, schema evolution, storage structures, query optimization, transaction management, versions, composite objects, and integration of a programming language and a database system.The book draws on the author's Orion project at MCC, currently the most advanced object-oriented database system, and places this work in a larger context by using relational database systems and other object-oriented systems for comparison.Won Kim is Director of the Object-Oriented and Distributed Systems Laboratory at Microelectronics and Computer Technology Corporation (MCC) in Austin, Texas.Contents: Introduction. Data Model. Basic Interface. Relationships with Non-Object-Oriented Databases. Schema Modification. Model of Queries. Query Language. Authorization. Storage

Structures. Query Processing. Transaction Management. Semantic Extensions. Integrating Object-Oriented Programming and Databases. Architecture. Survey of Object-Oriented Database Systems. Directions for Future Research and Development.

The second edition of this bestselling title is a perfect blend of theoretical knowledge and practical application. It progresses gradually from basic to advance concepts in database management systems, with numerous solved exercises to make learning easier and interesting. New to this edition are discussions on more commercial database management systems.

A comprehensive introduction to object-oriented concepts as applied to databases and knowledge-based systems. The principles of semantic data modelling are described in depth and this is followed by a comprehensive description of the application of object-oriented techniques in this area. Separate chapters are devoted to implementation aspects such as persistence and concurrency.

Database Systems

Practical PostgreSQL

C++ Object Databases

Databases

Upgrading Relational Databases with Objects