Object Oriented Database By Rajesh Narang

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Object-oriented Databases World Scientific
Database Management System (DBMS) and Oracle are essentially a part of the curriculum for undergraduate and postgraduate courses in Computer Science, Computer Applications, Computer Science and Engineering, Information Technology and Management. The book is organized into three parts to introduce the theoretical and programming concepts of DBMS. Part I (Basic Concepts and Oracle SQL) deals with DBMS basic, software analysis and design, data flow diagram, ER model, relational algebra, normal forms, SQL queries, functions, subqueries, different types of joins, DCL, DDL, DML, object constraints and security in Oracle. Part II (Application Using Oracle PL/SQL) explains PL/SQL basics, functions, procedures, packages, exception handling, triggers, implicit, explicit and advanced cursors using suitable examples. This part also covers advanced concepts related to PL/SQL, such as collection, records, objects, dynamic SQL and performance tuning. Part III (Advanced Concepts and Technologies) elaborates on advanced database concepts such as query processing, file organization, distributed architecture, backup, recovery, data warehousing, online analytical processing and data mining concepts and their techniques. All the chapters include a large number of examples. To further reinforce the concepts, numerous objective type questions and workouts are provided at the end of each chapter. Key Features • Explains each topic in a step-by-step detail.• Includes about 300 examples to illustrate the concepts. • Offers about 400 objective type questions to quiz students on key points.• Provides about 100 challenging workouts that invite deeper analysis and interpretation of the subject matter. New to the Second Edition • The book reorganized into three parts for better understanding of DBMS concepts.• All the existing chapters thoroughly revised and eight new chapters added.• New chapters discuss Oracle PL/SQL advanced programming concepts, data warehousing, OLTP, OLAP and data mining concepts.• Additional examples, questions and workouts in each chapter. TEACHING AID MATERIAL Teaching Aid Material for all the chapters is provided on the website of PHI Learning, which can be used by the faculties/teachers for delivering lectures. Visit www.phindia.com/gupta to explore the contents.
Objects and Databases PHI Learning Pvt. Ltd.
Bioinformatics: Methods and Applications provides a thorough and detailed description of principles, methods, and applications of bioinformatics in different areas of life sciences. It presents a compendium of many important topics of current advanced research and basic principles/approaches easily applicable to diverse research settings. The content encompasses topics such as biological databases, sequence analysis, genome assembly, RNA sequence data analysis, drug design, and structural and functional analysis of proteins. In addition, it discusses computational approaches for vaccine design, systems biology and big data analysis, and machine learning in bioinformatics.It is a valuable source for bioinformaticians, computer biologists, and members of biomedical field who needs to learn bioinformatics approaches to apply to their research and lab activities. Covers basic and more advanced developments of bioinformatics with a diverse and interdisciplinary approach to fulfill the needs of readers from different backgrounds Explains in a practical way how to decode complex biological problems using computational

approaches and resources Brings case studies, real-world examples and several protocols to guide the readers with a problem-solving approach
Object-Oriented Application Development Using the Caché Postrelational Database Springer Nature
This reprint collection consists of articles on object-oriented databases and provides a broad overview of current concepts, examples, and applications. The volume contains an introduction to the subject and papers organized into four sections: basic concepts, applications, design and implementation
Object-oriented Oracle World Scientific
The emergence of Java as the dominant object oriented programming language has resulted in upcoming OODBMS products such as Ozone, which are purely Java based. It has also resulted in upgradation of existing OODBMS products extending their features with Java environment. In the ORDBMS product line, Oracle 9i and DB2 are offering considerable object oriented database features. All these new developments are discussed in the Second Edition. The first edition of this compact text evoked good response from the readers. The new edition continues to provide a good exposure on object database systems, in terms of different approaches to object data management as well as the various architectures of object database systems. The three major approaches, semantic database systems approach, object-oriented programming language extension approach, and relational extension approach (leading to object relational system) are covered in detail. Exercises have been added at the end of each chapter to sharpen the analytical abilities of the reader. The book will be extremely useful to computer professionals and postgraduate students studying courses in database systems area.
Object-oriented Database Systems Addison-Wesley Professional
This book presents the basic concepts of object-oriented database design. It discusses several techniques for developing databases and object-oriented programming (OOP) using C++ and EIFFEL. The book also provides a definition for the field of object-oriented database design, explaining the concept of OOP and surveying the available products.
Object-oriented Concepts, Databases and Applications Springer Science & Business Media
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.
Object-oriented Database Design Clearly Explained Springer Science & Business Media
Enriching database models so as to allow the user to deal with fuzzy and uncertain information has been of scientists' concern for years. This resulted in numerous contributions, mainly with respect to the popular relational model or to some related form of it. The experience was instructive, although still far from concrete applications. The time has come that the advantages of object-oriented databases are acknowledged outside the research and academic worlds and a breakthrough of new commercial softwares is observed. Lately research has been devoted to the endowment of this type of databases with more real-world reflecting semantics. It proved that the object-oriented paradigm lends itself extremely well to it. This is very promising and opens new perspectives for the availability of new-generation database products in the near future. The book presents the latest research results in dealing with fuzziness and uncertainty in object-oriented databases. Contents:Foreword (R Yager)Preface (R de Caluwe)Basic Notions and Rationale of the Integration of Uncertainty Management and Object-Oriented Databases (R de Caluwe et al.)A Hierarchical Model of Fuzzy Classes (J-P Rossazza et al.)Modelling Impreciseness and Uncertainty in the Object-Oriented Data Model — A Similarity-Based Approach (R George et al.)Extending a Graph-Based Data Model to Manage Fuzzy and Uncertain Information (G Bordogna et al.)The UFO Database Model: Dealing with Imperfect Information (N van Gyseghem & R de Caluwe)Fuzzy Object-Oriented Data Model and Fuzzy Association Algebra (S Na & S Park) Readership: Researchers and engineers interested in databases and software engineering/programming. keywords:Concepts of Fuzzy Databases;Modeling of Fuzzy Data;Modeling of Uncertain Data;Modeling of Databases;Modeling of Object-Oriented Databases;Modeling of Fuzziness in Databases;Modeling of Uncertainty in Databases;Fuzzy Databases;Fuzzy Object-Oriented Databases;Uncertain Object-Oriented Databases
Advances in Object-Oriented Database Systems Morgan Kaufmann
Object orientation has become a ?must know? subject for managers, researchers, and software practitioners interested in the design, evolution, reuse and management of efficient software components.The book contains technical papers reflecting both theoretical and practical contributions from researchers in the field of object-oriented (OO) databases and software engineering systems. The book identifies actual and potential areas of integration of OO and database technologies, current and future research directions in software methodologies, and reflections about the OO paradigm.In providing current research and relevant information about this promising and rapidly growing field of object-oriented databases and software engineering systems, this book is invaluable to research scientists, practitioners, and graduate students working in the areas of databases and software engineering.
Introduction to Object-Oriented Databases Morgan & Claypool Publishers
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.
Bioinformatics Association for Computing Machinery (ACM)
Object-oriented paradigm; Object-oriented methodologies; Relational databases and OODBMS; The goals of OODBMSs; OODB features; Persistence; Object identity; OODB Architectures; Objectstore; Objectivity/DB; Versant; Evaluation of OODBMSs; Research in OODB.
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The contents of this second edition have been appropriately enhanced to serve the growing needs of the students pursuing undergraduate engineering courses in Computer Science, Information Technology, as well as postgraduate programmes in Computer Applications (MCA), MSc (IT) and MSc (Computer Science). The book covers the fundamental and theoretical concepts in an elaborate manner using SQL of leading RDBMS—Oracle, MS SQL Server and Sybase. This book is recommended in Guwahati University, Assam. Realizing the importance of RDBMS in all types of architectures and applications, both traditional and modern topics are included for the benefit of IT-savvy readers. A strong understanding of the relational database design is provided in chapters on Entity-Relationship, Relational, Hierarchical and Network Data Models, Normalization, Relational Algebra and Relational Calculus. The architecture of the legacy relational database R system, the hierarchical database IMS of IBM and the network data model DBTG are also given due importance to bring completeness and to show thematic interrelationships among them. Several chapters have been devoted to the latest database features and technologies such as Data Partitioning, Data Mirroring, Replication, High Availability, Security and Auditing. The architecture of Oracle, SQL of Oracle known as PL/SQL, SQL of both Sybase and MS SQL Server known as T-SQL have been covered. KEY FEATURES : Gives wide coverage to topics of network, hierarchical and relational data models of both traditional and generic modern databases. Discusses the concepts and methods of Data Partitioning, Data Mirroring and Replication required to build the centralized architecture of very large databases. Provides several examples, listings, exercises and solutions to selected exercises to stimulate and accelerate the learning process of the readers. Covers the concept of database mirroring and log shipping to demonstrate how to build disaster recovery solution through the use of database technology. Contents: Preface 1. Introduction 2. The Entity-Relationship Model 3. Data Models 4. Storage Structure 5. Relational Data Structure 6. Architecture of System R and Oracle 7. Normalization 8. Structured Query Language 9. T-SQL—Triggers and Dynamic Execution 10. Procedure Language—SQL 11. Cursor Management and Advanced PL/SQL 12. Relational Algebra and Relational Calculus 13. Concurrency Control and Automatic Recovery 14. Distributed Database and Replication 15. High Availability and RAID Technology 16. Security Features Built in RDBMS 17. Queries Optimization 18. Architecture of a Hierarchical DBMS 19. The Architecture of Network based DBTG System 20. Comparison between Different Data Models 21. Performance Improvement and Partitioning 22. Database Mirroring and Log Shipping for Disaster Recovery Bibliography Answers to Selected Exercises Index
Object-Oriented Database Systems: Approaches And Architectures 2Nd Ed. Springer Science & Business Media
Object-Oriented Database Systems offers a clear introduction to the concepts and features of object-oriented database, illustrated with several examples of current commercial systems. Professional database designers and users who want a clear guide to the current state of the art will find this book a must.
Object-Oriented Interfaces and Databases John Wiley & Sons
Written for applications programmers, software systems developers, and designers new to object technology, this book presents the major features of object-oriented database systems, addressing common problems and the latest solutions. It explains in detail how database technology can make use of fundamental object-oriented concepts such as data abstraction, encapsulation, inheritance and polymorphism.
Object-oriented Database Design Springer Science & Business Media
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.
Fundamentals of Object Databases McGraw-Hill Companies
Object-oriented database management systems (OODBMSs) have generated significant excitement in the database community in the last decade. This interest stems from a real need for data management support for what are called "advanced application areas" that are not well-served by relational technology. The case for object-oriented technology has been made on three fronts. First is the data modeling requirements of the new applications. Some of the more important shortcomings of the relational systems in meeting the requirements of these applications include: 1. Relational systems deal with a single object type: a relation. A relation is used to model different real-world objects, but the semantics of this association is not part of the database. Furthermore, the attributes of a relation may come only from simple and fixed data type domains (numeric, character, and, sometimes, date types). Advanced applications require explicit storage and manipulation of more abstract types (e.g., images, design documents) and the ability for the users to define their own application-specific types. Therefore, a rich type system supporting user defined abstract types is required. 2. The relational model structures data in a relatively simple and flat manner. Non traditional applications require more complex object structures with nested objects (e.g., a vehicle object containing an engine object).
Aspect-Oriented Database Systems PHI Learning Pvt. Ltd.
The first complete, hands-on guide to choosing, implementing, and managing the right object-oriented database for your organization If you are responsible for selecting and implementing an object-oriented database in your organization, you need a tool to help you evaluate your options and make the right selection. And now here it is: The Object Database Handbook-the first complete, hands-on guide for anyone planning a move to object-oriented database technology. Doug Barry, "Databases" columnist with Object Magazine, provides you with a rational, systematic approach to selecting, implementing, and managing the object-oriented database products best suited to your company's unique computing needs. The book covers all the bases, providing clear, step-by-step guidance on how to: * Match your organization's computing needs against available products * Form a selection team * Implement your database solutions so they work right the first time * Prototype your system * Design or convert data to the new database * Rework an existing relational model into an object model Also, the book provides dozens of valuable checklists that make it easy to identify your needs and match them with the right choices. And several full-scale case studies are developed throughout the book that help you arrive quickly at a practical understanding of the concepts discussed.
The Object Database Handbook Institute of Electrical & Electronics Engineers(IEEE)
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.
Object Databases Academic Press
Object-oriented database systems have been approached with mainly two major intentions in

mind, namely to better support new application areas including CAD/CAM, office automation, knowledge engineering, and to overcome the `impendance mismatch' between data models and programming languages. This volume gives a comprehensive overwiew of developments in this flourishing area of current database research. Data model and language aspects, interface and database design issues, architectural and implementation questions are covered. Although based on a series of workshops, the contents of this book has been carefully edited to reflect the current state of international research in object oriented database design and implementation.

Fundamentals of Object Databases PHI Learning Pvt. Ltd.

This book thoroughly explains object-oriented concepts such as abstract data typing, inheritance, and others. Surveys all existing and emerging database models, including relational, complex object and intelligent databases. Offers real-world examples drawn from actual products and practical prototypes.

Object-oriented Databases Addison Wesley Publishing Company

This book is for leading-edge technologists and executives responsible for data processing, office automation, and computer-integrated manufacturing. It discusses the concepts that underpin object-oriented approaches and presents a complete range of implementation possibilities. Emphasizes object-oriented database products and covers ONTOS, one of the commercially available DBMS.