

A First Course In Database Systems 3rd Edition

This textbook examines database systems from the viewpoint of a software developer. This perspective makes it possible to investigate why database systems are the way they are. It is of course important to be able to write queries, but it is equally important to know how they are processed. We e.g. don't want to just use JDBC; we also want to know why the API contains the classes and methods that it does. We need a sense of how hard is it to write a disk cache or

logging facility. And what exactly is a database driver, anyway? The first two chapters provide a brief overview of database systems and their use. Chapter 1 discusses the purpose and features of a database system and introduces the Derby and SimpleDB systems. Chapter 2 explains how to write a database application using Java. It presents the basics of JDBC, which is the fundamental API for Java programs that interact with a database. In turn, Chapters 3-11 examine the internals of a typical database engine. Each chapter covers a different database component, starting with the lowest level of abstraction (the disk

and file manager) and ending with the highest (the JDBC client interface); further, the respective chapter explains the main issues concerning the component, and considers possible design decisions. As a result, the reader can see exactly what services each component provides and how it interacts with the other components in the system. By the end of this part, s/he will have witnessed the gradual development of a simple but completely functional system. The remaining four chapters then focus on efficient query processing, and focus on the sophisticated techniques and algorithms that can replace the simple design

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choices described earlier. Topics include indexing, sorting, intelligent buffer usage, and query optimization. This text is intended for upper-level undergraduate or beginning graduate courses in Computer Science. It assumes that the reader is comfortable with basic Java programming; advanced Java concepts (such as RMI and JDBC) are fully explained in the text. The respective chapters are complemented by “end-of-chapter readings” that discuss interesting ideas and research directions that went unmentioned in the text, and provide references to relevant web pages, research articles, reference

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manuals, and books. Conceptual and programming exercises are also included at the end of each chapter. Students can apply their conceptual knowledge by examining the SimpleDB (a simple but fully functional database system created by the author and provided online) code and modifying it.

The first and only database primer for today's global economy Today's businesses depend on their databases to provide information essential for their day-to-day operations and to help them take advantage of today's rapidly growing and maturing electronic commerce opportunities. The primary responsibility for the

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design and maintenance of these databases rests with a company's information technology department. Unlike other IT resources currently available that tend to focus on a particular product, Database Design and Development: An Essential Guide for IT Professionals was created to give today's IT directors and other IT staff a solid basic knowledge of database design and development to help them make educated decisions about the right database environment for their companies. Today's IT professionals must understand the fundamentals in order to determine their next steps for specializing in the vast field of database

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technology. Database Design and Development: An Essential Guide for IT Professionals answers such common questions as: What is the purpose of a database system? What are the components of a database system? What type of data does your company need to capture? How do you design a database for a particular goal? How do you capture information through data modeling? How do you determine which database will best meet your business objectives? What's involved in effective database management and maintenance? How are database systems used to interface with the Internet? With

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more than twenty-five years of experience teaching IT courses and designing databases for some of America's top institutions, the author has succeeded in creating an essential resource for today's IT managers as well as for students planning a career in information technology.

This is a great book! This is the book I wish I had written. --Jim Gray, Microsoft Research, recipient of 1998 A.M. Turing Award for seminal contributions to database and transaction processing research
Databases and Transaction Processing provides a complete and clear explanation of the

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conceptual and engineering principles underlying the design and implementation of database and transaction processing applications. Rather than focusing on how to implement the database management system itself, this text focuses on how to build database applications. To provide a solid foundation for these principles, the book thoroughly covers the theory underlying relational databases and relational query languages. To illustrate both database and transaction processing concepts, a case study is carried throughout the book. The technical aspects of each chapter applied to the case study and the

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software engineering concepts required to implement the case study are discussed. In addition to the more traditional material -- relational databases, SQL, and the ACID properties of transactions -- the book provides in-depth coverage of the most current topics in database and transaction processing technology. Presents instructions on using MySQL, covering such topics as installation, querying, user management, security, and backups and recovery.

Second Edition

Database Systems: The Complete Book

Introduction to Database Management System

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The Practical Guide to Storing, Managing and Analyzing Big and Small Data

Database Systems

What Relational Databases Are Really All About

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Database Systems: The Complete Book is ideal for Database Systems and Database Design and Application courses offered at the junior, senior and graduate levels in Computer Science departments. A basic understanding of algebraic expressions and laws,

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logic, basic data structure, OOP concepts, and programming environments is implied. Written by well-known computer scientists, this introduction to database systems offers a comprehensive approach, focusing on database design, database use, and implementation of database applications and database management systems. The first half of the book provides in-depth coverage of databases from the point of view of the database designer, user, and application programmer. It covers the latest database standards SQL:1999, SQL/PSM, SQL/CLI, JDBC, ODL, and XML, with broader coverage of SQL than most other texts. The second half of the book provides in-depth coverage of databases

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from the point of view of the DBMS implementor. It focuses on storage structures, query processing, and transaction management. The book covers the main techniques in these areas with broader coverage of query optimization than most other texts, along with advanced topics including multidimensional and bitmap indexes, distributed transactions, and information integration techniques.

This edition combines clear explanations of database theory and design with up-to-date coverage of models and real systems. It features excellent examples and access to Addison Wesley's database Web site that includes further teaching, tutorials and many useful

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student resources.

This market-leading introduction to probability features exceptionally clear explanations of the mathematics of probability theory and explores its many diverse applications through numerous interesting and motivational examples. The outstanding problem sets are a hallmark feature of this book. Provides clear, complete explanations to fully explain mathematical concepts. Features subsections on the probabilistic method and the maximum-minimums identity. Includes many new examples relating to DNA matching, utility, finance, and applications of the probabilistic method. Features an intuitive treatment of probability—intuitive

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explanations follow many examples. The Probability Models Disk included with each copy of the book, contains six probability models that are referenced in the book and allow readers to quickly and easily perform calculations and simulations.

Now in its second edition, this book focuses on practical algorithms for mining data from even the largest datasets.

The Encyclopaedia Britannica

Advanced Database Systems

Goal Student Access Code Card for First Course in Database Systems

Python for Everybody

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Databases and Transaction Processing

A Dictionary of Arts, Sciences, Literature and General Information

Introduction to Database Management Systems is designed specifically for a single semester, namely, the first course on Database Systems. The book covers all the essential aspects of database systems, and also covers the areas of RDBMS. The book in

Database management is attracting wide interest in both academic and industrial contexts. New application areas such as CAD/CAM, geographic information systems, and multimedia are emerging. The needs of these application areas are far more complex than those of conventional

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business applications. The purpose of this book is to bring together a set of current research issues that addresses a broad spectrum of topics related to database systems and applications. The book is divided into four parts: - object-oriented databases, - temporal/historical database systems, - query processing in database systems, - heterogeneity, interoperability, open system architectures, multimedia database systems.

The fifth edition of Modern Database Management has been updated to reflect the most current database content available. It provides sound, clear, and current coverage of the concepts, skills, and issues needed to

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cope with an expanding organisational resource. While sufficient technical detail is provided, the emphasis remains on management and implementation issues pertinent in a business information systems curriculum. Principles of Management is designed to meet the scope and sequence requirements of the introductory course on management. This is a traditional approach to management using the leading, planning, organizing, and controlling approach. Management is a broad business discipline, and the Principles of Management course covers many management areas such as human resource management and strategic management, as well as behavioral areas such as motivation. No one

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individual can be an expert in all areas of management, so an additional benefit of this text is that specialists in a variety of areas have authored individual chapters.

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Database Internals

Database System Concepts

Database Systems Management and Design

Studyguide for First Course in Database Systems by Ullman, Jeffrey D.

Valuepack

Health Data in the Information Age

Regional health care databases are being established around the country with the goal of providing timely and useful

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information to policymakers, physicians, and patients. But their emergence is raising important and sometimes controversial questions about the collection, quality, and appropriate use of health care data. Based on experience with databases now in operation and in development, Health Data in the Information Age provides a clear set of guidelines and principles for exploiting the potential benefits of aggregated health data--without jeopardizing confidentiality. A panel of experts

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identifies characteristics of emerging health database organizations (HDOs). The committee explores how HDOs can maintain the quality of their data, what policies and practices they should adopt, how they can prepare for linkages with computer-based patient records, and how diverse groups from researchers to health care administrators might use aggregated data. Health Data in the Information Age offers frank analysis and guidelines that will be invaluable to anyone interested in the operation of health care databases.

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Python for Everybody is designed to introduce students to programming and software development through the lens of exploring data. You can think of the Python programming language as your tool to solve data problems that are beyond the capability of a spreadsheet. Python is an easy to use and easy to learn programming language that is freely available on Macintosh, Windows, or Linux computers. So once you learn Python you can use it for the rest of your career without needing to purchase any software. This book uses the

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Python 3 language. The earlier Python 2 version of this book is titled "Python for Informatics: Exploring Information". There are free downloadable electronic copies of this book in various formats and supporting materials for the book at www.pythonlearn.com. The course materials are available to you under a Creative Commons License so you can adapt them to teach your own Python course.

A First Course in Database Systems Database Systems: A Pragmatic Approach is a classroom textbook for use by students

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who are learning about relational databases, and the professors who teach them. It discusses the database as an essential component of a software system, as well as a valuable, mission critical corporate resource. The book is based on lecture notes that have been tested and proven over several years, with outstanding results. It also exemplifies mastery of the technique of combining and balancing theory with practice, to give students their best chance at success. Upholding his aim for brevity,

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comprehensive coverage, and relevance, author Elvis C. Foster's practical and methodical discussion style gets straight to the salient issues, and avoids unnecessary fluff as well as an overkill of theoretical calculations. The book discusses concepts, principles, design, implementation, and management issues of databases. Each chapter is organized systematically into brief, reader-friendly sections, with itemization of the important points to be remembered. It adopts a methodical and pragmatic approach

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to solving database systems problems. Diagrams and illustrations also sum up the salient points to enhance learning. Additionally, the book includes a number of Foster's original methodologies that add clarity and creativity to the database modeling and design experience while making a novel contribution to the discipline. Everything combines to make Database Systems: A Pragmatic Approach an excellent textbook for students, and an excellent resource on theory for the practitioner.

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Principles of Database Management

A First Course in Probability

Concepts, Languages & Architectures

Database Systems: A Practical Approach to Design, Implementation and Management with Corporate Computer and Network

Security: (International Edition) and

Making the Team (International Edition)

with Success in Your Project

Exploring Data in Python 3

When it comes to choosing, using, and maintaining a database, understanding its

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internals is essential. But with so many distributed databases and tools available today, it's often difficult to understand what each one offers and how they differ. With this practical guide, Alex Petrov guides developers through the concepts behind modern database and storage engine internals. Throughout the book, you'll explore relevant material gleaned from numerous books, papers, blog posts, and the source code of several open source databases. These resources are listed at the end of parts one and two. You'll

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discover that the most significant distinctions among many modern databases reside in subsystems that determine how storage is organized and how data is distributed. This book examines: Storage engines: Explore storage classification and taxonomy, and dive into B-Tree-based and immutable Log Structured storage engines, with differences and use-cases for each Storage building blocks: Learn how database files are organized to build efficient storage, using auxiliary data structures such as Page Cache, Buffer Pool

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and Write-Ahead Log Distributed systems:
Learn step-by-step how nodes and processes connect and build complex communication patterns Database clusters: Which consistency models are commonly used by modern databases and how distributed storage systems achieve consistency
Never HIGHLIGHT a Book Again Includes all testable terms, concepts, persons, places, and events. Cram101 Just the FACTS101 studyguides gives all of the outlines, highlights, and quizzes for your textbook with optional online comprehensive

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practice tests. Only Cram101 is Textbook Specific. Accompanies: 9780872893795. This item is printed on demand.

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

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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. *

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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.

Database System Concepts, 5/e, is intended

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for a first course in databases at the junior or senior undergraduate, or first-year graduate, level. In addition to basic material for a first course, the text contains advanced material that can be used for course supplements, or as introductory material for an advanced course. The authors assume only a familiarity with basic data structures, computer organization, and a high-level programming language such as Java, C, or Pascal. Concepts are presented as intuitive descriptions, and many are based

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on the running example of a bank enterprise. Important theoretical results are covered, but formal proofs are omitted. In place of proofs, figures and examples are used to suggest why a result is true. The fundamental concepts and algorithms covered in the book are often based on those used in existing commercial or experimental database systems. The aim is to present these concepts and algorithms in a general setting that is not tied to one particular database system. Details of particular commercial

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database systems are discussed in the case studies which constitute Part 8 of the book. The fifth edition of Database System Concepts retains the overall style of prior editions while evolving the content and organization to reflect the changes that are occurring in the way databases are designed, managed, and used.

First Course in Database Systems, A:
Pearson New International Edition
Relational Database Design Clearly
Explained

Multimedia Database Systems

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Relational Theory for Computer Professionals

A First Course in Database Systems
Database Design and Implementation

All of today's mainstream database products support the SQL language, and relational theory is what SQL is supposed to be based on. But are those products truly relational? Sadly, the answer is no.

This book shows you what a real relational product would be like, and how and why it would be so much better than what's currently available. With this unique

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book, you will: Learn how to see database systems as programming systems Get a careful, precise, and detailed definition of the relational model Explore a detailed analysis of SQL from a relational point of view There are literally hundreds of books on relational theory or the SQL language or both. But this one is different. First, nobody is more qualified than Chris Date to write such a book. He and Ted Codd, inventor of the relational model, were colleagues for many years, and Chris's involvement with the technology goes back

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to the time of Codd's first papers in 1969 and 1970. Second, most books try to use SQL as a vehicle for teaching relational theory, but this book deliberately takes the opposite approach. Its primary aim is to teach relational theory as such. Then it uses that theory as a vehicle for teaching SQL, showing in particular how that theory can help with the practical problem of using SQL correctly and productively. Any computer professional who wants to understand what relational systems are all about can benefit from

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this book. No prior knowledge of databases is assumed.

Business Database Systems arms you with the knowledge to analyse, design and implement effective, robust and successful databases. This book is ideal for students of Business/Management Information Systems, or Computer Science, who will be expected to take a course in database systems for their degree programme. It is also excellently suited to any practitioner who needs to learn, or refresh their knowledge of, the essentials

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of database management systems.

This textbook explains the conceptual and engineering principles of database design. Rather than focusing on how to implement a database management system, it focuses on building applications, and the theory underlying relational databases and relational query languages. An ongoing case study illustrates both database and software engineering concepts. Originally published as Databases and transaction processing by Pearson Education in 2002; the second edition adds a chapter on

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database tuning and a section on UML.

Annotation : 2004 Book News, Inc.,
Portland, OR (booknews.com).

For Database Systems and Database Design and Application courses offered at the junior, senior, and graduate levels in Computer Science departments. Written by well-known computer scientists, this accessible and succinct introduction to database systems focuses on database design and use. The authors provide in-depth coverage of databases from the point of view of the database designer, user,

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and application programmer, leaving implementation for later courses. It is the first database systems text to cover such topics as UML, algorithms for manipulating dependencies in relations, extended relational algebra, PHP, 3-tier architectures, data cubes, XML, XPATH, XQuery, XSLT. Supplements: Access Student and Instructor Resources at www.prenhall.com/ullman Author Website (Open Access) ; <http://infolab.stanford.edu/~ullman/fcdb.html>

Fundamentals of Database Systems

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Introduction to Database Management

Systems:

Database Design and Development

Principles of Management

Learning MySQL

A Deep Dive into How Distributed Data

Systems Work

The infrastructure-as-code revolution in IT is also affecting database administration. With this practical book, developer system administrators, and junior to mid-level DBAs will learn how the modern practice of site reliability engineering applies to the craft of database architecture and operations. Authors Laine Campbell and Charity Majors provide a framework for

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professionals looking to join the ranks of today's database reliability engineers (DBRE). You'll begin by exploring core operational concepts that DBREs need to master. Then you examine a wide range of database persistence options, including how to implement key technologies to provide resilient, scalable, and performant data storage and retrieval. With a firm foundation in database reliability engineering, you'll be ready to dive into the architecture and operations of any modern database. This book covers:

- Service-level requirements and risk management
- Building and evolving an architecture for operational visibility
- Infrastructure engineering and infrastructure management
- How to facilitate the release management process
- Data storage, indexing, and

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replication Identifying datastore characteristics and best use cases Datastore architectural components and data-driven architectures

Covers the important requirements of teaching databases from a modular and progressive perspective. This book can be used for a full course (or pair of courses), but its first half can be profitably used for a shorter course.

The latest edition of a popular text and reference on database research, with substantial new material and revision; covers classical literature and recent hot topics. Lessons from database research have been applied in academic fields ranging from bioinformatics to next-generation Internet architecture and in industrial uses including Web-based e-

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commerce and search engines. The core ideas in the field have become increasingly influential. This text provides both students and professionals with a grounding in database research and a technical context for understanding recent innovations in the field. The readings included treat the most important issues in the database area--the basic material for any DBMS professional. This fourth edition has been substantially updated and revised, with 21 of the 48 papers new to the edition, four of them published for the first time. Many of the sections have been newly organized, and each section includes a new or substantially revised introduction that discusses the context, motivation, and controversies in a particular area, placing it in the broader perspective of

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database research. Two introductory articles, never before published, provide an organized, current introduction to basic knowledge of the field; one discusses the history of data models and query languages and the other offers an architectural overview of a database system. The remaining articles range from the classical literature on database research to treatments of current hot topics, including a paper on search engine architecture and a paper on application servers, both written expressly for this edition. The result is a collection of papers that are seminal and also accessible to the reader who has a basic familiarity with database systems. Introductory, theory-practice balanced text teaching the fundamentals of databases to advanced undergraduates or

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graduate students in information systems or computer sci

The Complete Book

Modern Database Management

Business Database Systems

Database Reliability Engineering

Beyond Relational Databases

Issues and Research Directions

This is a revision of the market leading book for providing the fundamental concepts of database management systems. - Clear explanation of theory and design topics- Broad coverage of models and real systems- Excellent examples with up-to-date introduction to modern technologies- Revised to

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include more SQL, more UML, and XML and the Internet

This book presents basic research establishing the theory and practice of multimedia database systems. Issues relating to the theory of such systems, query languages for multimedia databases, indexing structures, implementations, and industrial and government applications are addressed. The book will form a valuable text for advanced courses.

Database System Concepts by Silberschatz, Korth and Sudarshan is now in its 6th edition and is one of the cornerstone texts of database education. It presents the fundamental concepts of database management in

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an intuitive manner geared toward allowing students to begin working with databases as quickly as possible. The text is designed for a first course in databases at the junior/senior undergraduate level or the first year graduate level. It also contains additional material that can be used as supplements or as introductory material for an advanced course. Because the authors present concepts as intuitive descriptions, a familiarity with basic data structures, computer organization, and a high-level programming language are the only prerequisites. Important theoretical results are covered, but formal proofs are omitted. In place of proofs, figures and examples are used to

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suggest why a result is true.

Presents the fundamental concepts of database management. This text is suitable for a first course in databases at the junior/senior undergraduate level or the first year graduate level.

Mining of Massive Datasets

A Pragmatic Approach

Use, Disclosure, and Privacy

Database System Implementation

An Advanced Course in Database Systems

An Essential Guide for IT Professionals

/ 3530K-9, 0-13-035300-0,*

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ULLMAN/WIDOM, A First Course in Database Systems, 2E */ Written by well-known computer scientists, this accessible and succinct introduction to database systems focuses on database design and use. Provides a more extensive treatment of query processing than other books on the market. The authors provide in-depth coverage of databases from the point of view of the database designer, user, and application programmer. It covers the

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latest database standards: SQL: 1999, SQL/PSM, SQL/CLI, JDBC, ODL, and XML, with broader coverage of SQL than most other books. Now includes coverage of the technologies used to connect database programming with C or Java code—SQL/PSM, SQL/CLI, and JDBC. For database systems and database design and application professionals.

This text goes beyond the relational coverage of a typical first course in databases. Dietrich and Urban include

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object-oriented conceptual data modeling, object oriented databases, and databases and the Web. Topic coverage is in-depth and accessible to undergraduates as well as graduate CS students. Teachers can select the topics that best fit their course.

Designing and Operating Resilient Database Systems

Readings in Database Systems

An Application-oriented Approach