An Introduction To Database Systems Bipin C Desai

Designed to provide an insight into the database concepts DESCRIPTION Book teaches the essentials of DBMS to anyone who wants to become an effective and independent DBMS Master. It covers all the DBMS fundamentals without forgetting few vital advanced topics such as from installation, configuration and monitoring, up to the backup and migration of database covering few database client tools. KEY FEATURES Book contains real-time executed commands along with screenshot Parallel execution and explanation of Oracle and MySQL Database commands A Sing and Professionals Practical oriented book WHAT WILL YOU LEARN Relational Database,Keys Normalization of database SQL, SQL Queries, SQL joins Aggregate Functions,Oracle and Mysql tools WHO THIS BOOK IS FOR Students of Polytechnic Diploma Classes- Computer Science/ Information Technology Graduate Students- Computer Science/ CSE / IT/ Computer Applications Master Class Students—Msc (CS/IT)/ MCA/ M.Phil, M.Tech, M.S. Industry Professionals- Preparing for Certifications Table of Contents ?1. Fundamentals of data and Database management sy Relational Database and normalization 4. Open source technology & SQL 5. Database queries 6. SQL operators 7. Introduction to database joins 8. Aggregate functions, subqueries and users 9. Backup & Recovery 10. Database installation 11. Oracle and MYSQL tools 12. Exercise

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 t 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 proc 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 Security Fundamentals, and PC Hardware Essentials--offer a coordinated information technology curriculum. Learn more at www.wiley.com/go/pathways

The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, sha how to take full advantage of Rust's features--from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables and then move on to more advanced concepts, such as: • Ownership and borrowing, lifetimes, and traits • Using Rust's memory safety guarantees to build fast, safe programs • Testing, error handling, and effective refactoring • Generics, smart pointers, multithreading, trait objects, and advanced pattern matching • Using Cargo, Rust's built-in package manager, to build, test, and docu • How best to use Rust's advanced compiler with compiler-led programming techniques You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendixes on Rust development tools and editions.

Introduced forty years ago, relational databases proved unusually succe- ful and durable. However, relational database systems were not designed for modern applications and computers. As a result, specialized database systems now proliferate trying to capture various pieces of the database market. Database research is pulled into di?erent directions, and speci- ized database conferences are created. Yet the current chaos in databases is likely only temporary because every technology, including databases, becomes standardized over time. The history of databases show technologies. For example, in the early days of computing, users stored their data in text ?les in any format and organization they wanted. These early days were followed by information retrieval systems, which required some structure for text documents, such as a title, authors, and a publisher. The information retrieval systems were followed by database systems, which added even more structure to the data and made querying easier. In the late 1990s, the emergence of the Internet brought a period of relative chaos and interest in unstructured and “semistructured data” as wassenvisionedthateverywebpagewouldbelikeapageinabook.However, with the growing maturity of the Internet, the interest in structured data was regained because the most popular websites are, in fact, based on databases. The question is not whether future data stores need structure but what structure they need.

RDF Database Systems

Readings in Database Systems

Concepts, Design and Applications

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

Normal Forms and All That Jazz

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

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 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 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 this book. No prior knowledge of databases is assumed.

This book provides a comprehensive yet concise coverage of the concepts and technology of database systems and their evolution into knowledge-bases. The traditional material on database systems at senior undergraduate level is covered. An understanding of concepts is emphasized avoiding extremes in formalism or detail. Rather than be restricted to a single example used over an entire book, a variety of examples are used. These enable the reader to understand the basic abstractions which underlie description of many practical situations. A major portion of the book concerns database system technology with focus on the relational model. Various topics are discussed in detail, preparing the ground for more advanced work.

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.

Fundamentals of Relational Database Management Systems

Principles Programming Performance

Database Systems in Science and Engineering

SQL

Learn essential concepts of database systems

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 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 suggest why a result is true.

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-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 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 a reader who has a basic familiarity with database systems.

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 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 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.

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

An Essential Guide for IT Professionals

Easy SQL Programming & Database Management for Beginners, Your Step-By-Step Guide to Learning the SQL Database

Database Internals

Temporal Data and the Relational Model

Database Management System

An Introduction to Database Systems

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 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 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 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.

Because databases often stay in production for decades, careful design is critical to making the database serve the needs of your users over years, and to avoid subtle errors or performance problems. In this book, C.J. Date, a leading exponent of relational databases, lays out the principles of good database design.

Introductory, theory-practice balanced text teaching the fundamentals of databases to advanced undergraduates or graduate students in information systems or computer science.

Second Edition

Introduction to Database Management Systems:

What Relational Databases Are Really All About

Introduction to Database and Knowledge-Base Systems

SQL and Relational Theory

This text is intended for undergraduates on courses in database technology.

This book describes in detail how ARIS methods model and identify business processes by means of the UML (Unified Modeling Language), leading to an information model that serves as the basis for a systematic and intelligent development of application systems. Multiple real-world examples using SAP R/3 illustrate aspects of business process modeling including methods of knowledge management, implementation of workflow systems and standard software solutions, and the deployment of ARIS methods.

Learn SQL Programming And Database Management Today With This Easy Step-By-Step Guide! Do you want learn SQL Programming? Do you want to understand how to manage databases without getting overwhelmed by complicated jargons and lingos? If so, "Easy SQL Programming & Database Management For Beginners. Your Step-By-Step Guide To Learning The SQL Database" by Felix Alvaro is THE book for you! It covers the most essential topics you must learn to begin programming with SQL. SQL is a software language that is powerful yet simple, flexible, portable and, most of all, integrated into numerous database applications. The current trend now is to become more digital in managing databases. As I mention in this guide, deciding to become a database professional will definitely promise you a secured job with a potential high remuneration or well-paid freelance work. On the average, an entry-level database analyst in the United States earns an annual salary of around $92,000 USD. What Separates This Book From The Rest? What separates this book from all the others out there is the approach to teaching. A lot of the books you will stumble upon simply throw information at you, leaving you confused and stuck. We believe that books of this nature should be easy to grasp and written in jargon-free English you can understand, making you feel confident and allowing you to grasp each topic with ease. To help you achieve this, the guide has been crafted in a step-by-step manner which we feel is the best way for you to learn a new subject, one step at a time. It also includes various images to give you assurance you are going in the right direction, as well as having exercises where you can proudly practice your newly attained skills. You Will Learn The Following: The history of SQL and its uses The fundamentals of Relational Databases and Database Management Systems The SQL Structure The SQL Data Types Data Definition Language Statements Data Manipulation Language Statements Data Query Language Statements Transactional Control Commands Working with Database Views Enhancing Database Designs Using Primary and Foreign Keys, Indexes and Normalization Understanding Cursors, Triggers and Errors And much more! This guide also includes exercises throughout to give you practice, and Chapter 12 is focused solely on providing you exercises to let you practice what you have learnt. As a wise-man once said: "Practice makes perfect." So don't delay it any longer. Take this opportunity and invest in this guide now. You will be amazed by the skills you will quickly attain! Order Your Copy Now! See you inside!

Temporal database systems are systems that provide special support for storing, querying, and updating historical and/or future data. Current DBMSs provide essentially no temporal features at all, but this situation is likely to change soon for a variety of reasons; in fact, temporal databases are virtually certain to become important sooner rather than later, in the commercial world as well as in academia. This book provides an in-depth description of the foundations and principles on which those temporal DBMSs will be built. These foundations and principles are firmly rooted in the relational model of data; thus, they represent an evolutionary step, not a revolutionary one, and they will stand the test of time. This book is arranged in three parts and a set of appendixes: * Preliminaries: Provides a detailed review of the relational model, and an overview of the Tutorial D language. * Laying the Foundations: Explains basic temporal data problems and introduces fundamental constructs and operators for addressing those problems. * Building on the Foundations: Applies the material of the previous part to issues of temporal database design, temporal constraints, temporal query and update, and much more. * Appendixes: Include annotated references and bibliography, implementation considerations, and other topics. Key features: * Describes a truly relational approach to the temporal data problem. * Addresses implementation as well as model issues. * Covers recent research on new database design techniques, a new normal form, new relational operators, new update operators, a new approach to the problem of "granularity," support for "cyclic point types," and other matters. * Includes review questions and exercises in every chapter. * Suitable for both reference and tutorial purposes.

Principles of Database Management

Wiley Pathways Introduction to Database Management

Database

Introduction to Database Management System

Database Design and Relational Theory

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.

For over 25 years, C. J. Dates An Introduction to Database Systems has been the authoritative resource for readers interested in gaining insight into and understanding of the principles of database systems. This exciting revision continues to provide a solid grounding in the foundations of database technology and to provide some ideas as to how the field is likely to develop in the future. The material is organized into six major parts. Part I provides a broad introduction to the concepts of database systems in general and relational systems in particular. Part II consists of a careful description of the relational model, which is the theoretical foundation for the database field as a whole. Part III discusses the general theory of database design. Part IV is concerned with transaction management. Part V shows how relational concepts are relevant to a variety of further aspects of database technology—security, distributed databases, temporal data, decision support, and so on. Finally, Part VI describes the impact of object technology on database systems. This Seventh Edition of An Introduction to Database Systems features widely rewritten material to improve and amplify treatment o

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 student resources.

SQL is full of difficulties and traps for the unwary. You can avoid them if you understand relational theory, but only if you know how to put the theory into practice. In this insightful book, author C.J. Date explains relational theory in depth, and demonstrates through numerous examples and exercises how you can apply it directly to your use of SQL. This second edition includes new material on recursive queries, “missing information” without nulls, new update operators, and topics such as aggregate operators, grouping and ungrouping, and view updating. If you have a modest-to-advanced background in SQL, you’ll learn how to deal with a host of common SQL dilemmas. Why is proper column naming so important? Nulls in your database are causing you to get wrong answers. Why? What can you do about it? Is it possible to write an SQL query to find employees who have never been in the same department for more than six months at a time? SQL supports “quantified comparisons,” but they’re better avoided. Why? How do you avoid them? Constraints are crucially important, but most SQL products don’t support them properly. What can you do to resolve this situation? Database theory and practice have evolved since the relational model was developed more than 40 years ago. SQL and Relational Theory draws on decades of research to present the most up-to-date treatment of SQL available. C.J. Date has a stature that is unique within the database industry. A prolific writer well known for the bestselling textbook An Introduction to Database Systems (Addison-Wesley), he has an exceptionally clear style when writing about complex principles and theory.

Database Design and Implementation

Relational Theory for Computer Professionals

From Biological to Spatio-Temporal

An Introduction to Database Systems

Introduction to Databases

RDF Database Systems is a cutting-edge guide that distills everything you need to know to effectively use or design an RDF database. This book starts with the basics of linked open data and covers the most recent research, practice, and technologies to help you leverage semantic technology. With an approach that combines technical detail with theoretical background, this book shows how to design and develop semantic web applications, data models, indexing and query processing solutions. Understand the Semantic Web, RDF, RDFS, SPARQL, and OWL within the context of relational database management and NoSQL systems Learn about the prevailing RDF triples solutions for both relational and non-relational databases, including column family, document, graph, and NoSQL Implement systems using RDF data with helpful guidelines and various storage solutions for RDF Process SPARQL queries with detailed explanations of query optimization, query plans, caching, and more Evaluate which approaches and systems to use when developing Semantic Web applications with a helpful description of commercial and open-source systems

Want to learn about databases without the tedium? With its unique combination of Japanese-style comics and serious educational content, The Manga Guide to Databases is just the book for you. Princess Ruruna is stressed out. With the king and queen away, she has to manage the Kingdom of Kod's humongous fruit-selling empire. Overseas departments, scads of inventory, conflicting prices, and so many customers! It's all such a confusing mess. But a mysterious book and a helpful fairy promise to solve her organizational problems—with the practical magic of databases. In The Manga Guide to Databases, Tico the fairy teaches the Princess how to simplify her data management. We follow along as they design a relational database, understand the entity-relationship model, perform basic database operations, and delve into more advanced topics. Once the Princess is familiar with transactions and basic SQL statements, she can keep her data timely and accurate for the entire kingdom. Finally, Tico explains ways to make the database more efficient and secure, and they discuss methods for concurrency and replication. Examples and exercises (with answer keys) help you learn, and an appendix of frequently used SQL statements gives the notes you need to create and maintain full-featured databases. (Of course, it wouldn't be a royal kingdom without some drama, so read on to find out who gets the girl—the arrogant prince or the humble servant.) This EduManga book is a translation of a bestselling series in Japan, co-published with Ohmsha, Ltd., of Tokyo, Japan.

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

Computerized databases provide a powerful everyday tool for data handling by scientists and engineers. However, the unique nature of many technical tasks requires a specialized approach to make use of the many powerful commercial database tools now available. Using these tools has proved difficult because database technology is often shrouded in layers of jargon. An essential guide for scientists and engineers who use computers to avoid drowning in a flood of data, Database Systems in Science and Engineering dispels the myths associated with database design and breaks the barriers to successful databases. Using the language of scientists and engineers, this book explains concepts and problems, offers practical steps and solutions, and provides new ideas for better data handling. The first part of the book presents an overview of technical databases using examples taken from real applications and the current state of technical databases. The second part covers the computer implementation of technical databases, including examples and the necessary computer science theory to form a sound background. The authors confront the many difficulties that arise in the design and implementation of a realistic database and offer solutions to these challenges. Before beginning any database project, scientists and engineers should read this book to understand how to make every database project successful through careful planning, good design, and efficient use of database tools.

Database Systems

How to Write Accurate SQL Code

Fundamentals of Database Systems

An Evolutionary Approach

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.

An introductory, yet comprehensive, database textbook intended for use in undergraduate and graduate information systems database courses. This text also provides practical content to current and aspiring information systems, business data analysis, and decision support industry professionals. Database Systems: Introduction to Databases and Data Warehouses covers both analytical and operations database as knowledge of both is integral to being successful in today’s business environment. It also provides a solid theoretical foundation and hands-on practice using an integrated web-based data-modeling suite.

A database management system (DBMS) is a collection of programs that enable users to create and maintain a database; it also consists of a collection of interrelated data and a set of programs to access that data. Hence, a DBMS is a general-purpose software system that facilitates the processes of defining, constructing, and manipulating databases for various applications. The primary goal of a DBMS is to provide an environment that is both convenient and efficient to use in retrieving and storing database information. It is an interface between the user of application programs, on the one hand, and the database, on the other. The objective of Database Management System: An Evolutionary Approach, is to enable the learner to grasp a basic understanding of a DBMS, its need, and its terminologies discern the difference between the traditional file-based systems and a DBMS code while learning to grasp theory in a practical way study provided examples and case studies for better comprehension This book is intended to give under- and postgraduate students a fundamental background in DBMSs. The book follows an evolutionary learning approach that emphasizes the basic concepts and builds a strong foundation to learn more advanced topics including normalizations, normal forms, PL/SQL, transactions, concurrency control, etc. This book also gives detailed knowledge with a focus on entity-relationship (ER) diagrams and their reductions into tables, with sufficient SQL codes for a more practical understanding.

The database field has experienced a rapid and incessant growth since the development of relational databases. The progress in database systems and applications has produced a diverse landscape of specialized technology areas that have often become the exclusive domain of research specialists. Examples include active databases, temporal databases, object-oriented databases, deductive databases, imprecise reasoning and queries, and multimedia information systems. This book provides a systematic introduction to and an in-depth treatment of these advanced database areas. It supplies practitioners and researchers with authoritative coverage of recent technological advances that are shaping the future of commercial database systems and intelligent information systems. Advanced Database Systems was written by a team of six leading specialists who have made significant contributions to the development of the technology areas covered in the book. Benefiting from the authors’ long experience teaching graduate and professional courses, this book is designed to provide a gradual introduction to advanced research topics and includes many examples and exercises to support its use for individual study, desk reference, and graduate classroom teaching.

Introduction to Database Systems

Triples Storage and SPARQL Query Processing

A Detailed Investigation Into the Application of Interval and Relation Theory to the Problem of Temporal Database Management

The Rust Programming Language (Covers Rust 2018)

Introduction to Databases and Data Warehouses

Database: Principles Programming Performance provides an introduction to the fundamental principles of database systems. This book focuses on database programming and the relationships between principles, programming, and performance. Organized into 10 chapters, this book begins with an overview of database design principles and presents a comprehensive introduction to the concepts used by a DBA. This text then provides grounding in many abstract concepts of the relational model. Other chapters introduce SQL, describing its capabilities and covering the statements and functions of the programming language. This book provides as well an introduction to Embedded SQL and Dynamic SQL that is sufficiently detailed to enable students to immediately start writing database programs. The final chapter deals with some of the motivations for database systems spanning multiple CPUs, including client-server and distributed transactions. This book is a valuable resource for database administrators, application programmers, specialist users, and end users.

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, 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 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.

Database System Concepts

Advanced Database Systems

The Manga Guide to Databases

A Deep Dive into How Distributed Data Systems Work

Fundamental of Database Management System