Course Notes On Databases And Database Management Systems

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Advanced Database Systems Springer Science & Business Media
Differing from other books on the subject, this one uses the framework of constraint databases to provide a natural and powerful generalization of relational databases. An important theme running through the text is showing how relational databases can smoothly develop into constraint databases, without sacrificing any of the benefits of relational databases whilst gaining new advantages. Peter Revesz begins by discussing data models and how queries may be addressed to them. From here, he develops the theory of relational and constraint databases, including Datalog and the relational calculus, concluding with three sample constraint database systems -- DISCO, DINGO, and RATHER. Advanced undergraduates and graduates in computer science will find this a clear introduction to the subject, while professionals and researchers will appreciate this novel perspective on their subject.
Fundamentals of Database Systems Springer
Database Management Systems provides comprehensive and up-to-date coverage of the fundamentals of database systems. Coherent explanations and practical examples have made this one of the leading texts in the field. The third edition continues in this tradition, enhancing it with more practical material. The new edition has been reorganized to allow more flexibility in the way the course is taught. Now, instructors can easily choose whether they would like to teach a course which emphasizes database application development or a course that emphasizes database systems issues. New overview chapters at the beginning of parts make it possible to skip other chapters in the part if you don't want the detail. More applications and examples have been added throughout the book, including SQL and Oracle examples. The applied flavor is further enhanced by the two new database applications chapters.
Readings in Database Systems World Scientific
This book provides a concise but comprehensive guide to the disciplines of database design, construction, implementation, and management. Based on the authors' professional experience in the software engineering and IT industries before making a career switch to academia, the text stresses sound database design as a necessary precursor to successful development and administration of database systems. The discipline of database systems design and management is discussed within the context of the bigger picture of software engineering. Students are led to understand from the outset of the text that a database is a critical component of a software infrastructure, and that proper database design and management is integral to the success of a software system. Additionally, students are led to appreciate the huge value of a properly designed database to the success of a business enterprise. The text was written for three target audiences. It is suited for undergraduate students of computer science and related disciplines who are pursuing a course in database systems, graduate students who are pursuing an introductory course to database, and practicing software engineers and information technology (IT) professionals who need a quick reference on database design. Database Systems: A Pragmatic Approach, 3rd Edition discusses concepts, principles, design, implementation, and management issues related to database systems. Each chapter is organized into brief, reader-friendly, conversational sections with itemization of salient points to be remembered. This pragmatic approach includes adequate treatment of database theory and practice based on strategies that have been tested, proven, and refined over several years. Features of the third edition include: Short paragraphs that express the salient aspects of each subject Bullet points itemizing important points for easy memorization Fully revised and updated diagrams and figures to illustrate concepts to enhance the student's understanding Real-world examples Original methodologies applicable to database design Step-by-step, student-friendly guidelines for solving generic database systems problems Opening chapter overviews and concluding chapter summaries Discussion of DBMS alternatives such as the Entity–Attributes–Value model, NoSQL databases, database-supporting frameworks, and other burgeoning database technologies A chapter with sample assignment questions and case studies This textbook may be used as a one-semester or two-semester course in database systems, augmented by a DBMS (preferably Oracle). After its usage, students will come away with a firm grasp of the design, development, implementation, and management of a database system.
Databases, Types and the Relational Model Springer
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 shows periods of chaos followed by periods of dominant 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 it wasenvisionedthateverywebpagewouldbelikeapageinabook.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.
Database Systems Springer
Data mining from traditional relational databases as well as from non-traditional ones such as semi-structured data, Web data, and scientific databases housing biological, linguistic, and sensor data has recently become a popular way of discovering hidden knowledge. This book on database support for data mining is developed to approaches exploiting the available database technology, declarative data mining, intelligent querying, and associated issues, such as optimization, indexing, query processing, languages, and constraints. Attention is also paid to the solution of data preprocessing problems, such as data cleaning, discretization, and sampling. The 16 reviewed full papers presented were carefully selected from various workshops and conferences to provide complete and competent coverage of the core issues. Some papers were developed within an EC funded project on discovering knowledge with inductive queries.
DataBase Management Systems Morgan Kaufmann
Database System Concepts by Silberschatz, Korth and Sudarshan is now in its 7th 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.

Database Management Systems Apress
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
ISE Database System Concepts Addison-Wesley
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.
Advances in Databases: Concepts, Systems and Applications Springer Science & Business Media
This is an introductory text to the science of neurobiology, describing animal nervous systems, what they consist of, how they work, and how they are studied. Unlike many other neurobiology texts, considerable discussion is given to both human and non-human nervous systems. Written in an easy-to-read style, it will be useful for both biology and medical students. It provides the opportunity for self-testing at the end of each chapter, with objectives and questions. A CD-ROM entitled 'The Human Brain' (ISBN 3-540-14666-0) has been produced to accompany this text, and can be purchased either separately or together with the book (ISBN 3-540-63778-8).
Temporal Databases: Research and Practice Springer Science & Business Media
An updated, introductory management book which discusses object oriented data modeling and client server platforms. KEY FEATURES: It explores management and design within the context of the database development life cycle.
Database Systems: The Complete Book "O'Reilly Media, Inc."
This is a book on database management that is based on an earlier book by the same authors,Foundation for Future Database Systems: The Third Manifesto. It can be seen as an abstract blueprint for the design of a DBMS and the language interface to such a DBMS. In particular, it serves as a basis for a model of type inheritance. This book is essential reading for database professionals.
An Introduction to Database Systems Que Publishing
Crypto'92 took place on August 16-20, 1992. It was the twelfth in the series of annual cryptology conferences held on the beautiful campus of the University of California, Santa Barbara. Once again, it was sponsored by the International Association for Cryptologic Research, in cooperation with the IEEE Computer Society Technical Committee on Security and Privacy. The conference ran smoothly, due to the diligent efforts of the g- eral chair, Spyros Magliveras of the University of Nebraska. One of the measures of the success of this series of conferences is represented by the ever increasing number of papers submitted. This year, there were 135 submissions to the c- ference, which represents a new record. Following the practice of recent program comm- tees, the papers received anonymous review. The program committee accepted 38 papers for presentation. In addition, there were two invited presentations, one by Miles Smid on the Digital Signature Standard, and one by Mike Fellows on presenting the concepts of cryptology to elementary-age students. These proceedings contains these 40 papers plus 3 papers that were presented at the Rump Session. I would like to thank all of the authors of the submitted papers and all of the speakers who presented papers. I would like to express my sincere appreciation to the work of the program committee: Ivan Damgard (Aarhus University, Denmark), Odd Goldreich (Technion, Israel), Burt Kaliski (RSA Data Security, USA), Joe Kilian (NEC, USA).
Spatio-Temporal Databases Springer Science & Business Media
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.
The Theory of Relational Databases CRC Press
Provides in-depth coverage of databases from the point of view of the database designer, user, and application programmer, leaving implementation for later courses. It covers the latest database standards: SQL: 1999, SQL/PSM, SQL/CLI, JDBC, ODL, and XML.
Database Systems Addison Wesley Longman
This book is an introduction and source book for practitioners, graduate s- dents, and researchers interested in the state of the art and practice in spatiot- poral databases. It collects the most important and representative research c- ried out in the project CHOROCHRONOS and presents it in a uni?ed fashion. CHOROCHRONOS was a Training and Mobility Research Network funded by the European Commission with the objective to study the design, implemen- tion, and application of spatiotemporal database management systems. This book would never have been possible if it was not for the devoted work of many people. First and foremost, we would like to thank the authors of the nine chapters of this book for their hard work. We would also like to acknowledge the help of Christiane Bernard, our o?cer from the European Commission, who saw the project to its conclusion, working as hard as we did to make it a thorough success. The constructive comments and feedback of our reviewer Colette Roland (University of Paris-1) are also very much appreciated. Last, but not least, we would like to thank all the students and postdoctoral fellows who were trained during CHOROCHRONOS. We hope the time they spent at CHOROCHRONOS node institutions was rewarding and lots of fun! March 2003 Timos Sellis Manolis Koubarakis Andrew Frank, Vienna St´ ephane Grumbach Ralf Hartmut Guting¨ Christian Jensen Nikos Lorentzos Yannis Manolopoulos Enrico Nardelli Barbara Pernici Babis Theodoulidis Nectaria Tryfona Hans-J¨ org Schek Michel Scholl Table of Contents 1 Introduction . . . . . .
Database Management and Design BPB Publications
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
Database Support for Data Mining Applications Springer Science & Business Media
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.
Learning MySQL and MariaDB "O'Reilly Media, Inc."
This book constitutes the refereed proceedings of the 12th International Conference on Database Systems for Advanced Applications, DASFAA 2007, held in Bangkok, Thailand, April 2007. Coverage includes query language and query optimization, data mining and knowledge discovery, P2P and grid-based data management, XML databases, database modeling and information retrieval, Web and information retrieval, database applications and security.
Introduction to Databases Pearson Education India
A summary of research carried out in the CHOROCHRONOS Project, established as an EC-funded Training and Mobility Research Network with the objective of studying the design, implementation, and application of spatio-temporal database management systems. The nine coherent chapters by leading research groups are written in a tutorial style, making the research contributions of the project accessible to a wider audience interested in spatio-temporal information processing. Following an introductory overview, the book presents chapters on ontologies for spatio-temporal databases, conceptual models, spatio-temporal models and languages, access methods and query processing, architectures and implementation of spatio-temporal DBMS, interactive spatio-temporal documents, and future perspectives.
Database Programming Languages McGraw-Hill Science, Engineering & Mathematics
Visual Basic.NET Database Programming walks the readers step-by-step through the topics they need to know to use databases effectively. This book teaches with real-world scenarios how to load, display, manipulate, modify and save data in databases. It shows the reader how to build multi-tier applications that implement enterprise-wide business solutions, build Web Servers, manage large amounts of data, find specific records, sort data, perform complex queries, and use XML--an integral part of data handling in Visual Basic.NET.