Database Systems: The Complete Book

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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 Systems: The Complete Book Details

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From Reader Review Database Systems: The Complete Book for online ebook

Jeffrey Milloy says

databases are boring. that's a huge reason the book got few stars from me, so keep that in mind. in its favor are a few key features. it certainly is complete. the theoretical aspects of database design, sql and the practice of implementing a database schema, concurrency control, and the more general task of large information management - all of these are included and more. and in fact, the chapters and sections are divided into adequately (although maybe overly) small bite size pieces made for easy reading. examples are provided as necessary, but nearly never cover many of the more frequent cases.

in general, i find it overshot its attempt at readability and at the same time remained difficult to understand at times. certainly NOT a good reference book, unless after having read large portions beforehand.

Jessica says

It made more sense than the professor.

Emil says

I've read all kinds of negative reviews about this book.
Most of them refer to it as boring; poorly written; too teoretical, so
I was skeptical about reading the book, but I had to as it is the book used in my university course in database systems.

The way I see it here are the strong and weak sides of the book.
(I've only read it half through).

Strong sides:
1) The best thing in the book is that the information in structured in small sections and it is easy to find information on a certain subject. (That being said, though, the book is not good for a reference material - it's more of a textbook.)

2) My point of view is that the book is actually not poorly written. The explanations are clear and their only downside is they are too exhaustive and detailed sometimes.

3) There's a summary after every chapter which really helps in the learning process (and you don't have to read it if you don't need to).

4) Although examples are frequently kind of stupid, at least they are simple and you get the idea.

5) The book teaches you what are some different ways to model data in a very accessible fashion. It also teaches the design process, and there is a section on good design principles (which are mostly obvious, but

not always) and the design process.

Weak sides:
1) References throughout the book - for example you are reading on a certain topic and then the author gives an example which involves a figure that is tens of pages back in the book; and the figure turns out to be a 4-line CREATE TABLE clause. I guess they really got into the idea that they need to avoid repeating themselves (but hey, this is a programming/design principle, plus this is the book that repeats all kinds of other stuff throught the book).

2) Some technical inaccuracies may occur. I'm not giving proof, beacause I am too lazy, but I have the feeling that the authors see most things as black and white - like there's no other option or opinion. Again, this is not a completely valid point of mine.

EDIT: an example: in the Datalog chapter, there's a recursive rule that searches for all pairs of cities that are reachable through airflights. But the author fails to point out that this would only work if the graph of reachability has no cycles. Otherwise, all the rules in the sections on recursion would go down in infinite recursion.

3) Other inaccuracies like for example in the diagram labeled "Components of the database system" contains buffer manager and storage manager as obviously two seperate components, but later in the same chapter, the author refers to the buffer manager as a component of the storage manager. Stuff like that.

4) Really too exhaustive explanations. Instead of reading them, try to figure out the examples on your own first.

5) Somewhat poor design of the pages and figure/boxes placement.

Although not a great book, I really feel I have learned a lot about databases.
But if you have choice I would recommend finding another book.

Jeff Jia says

This is a good reference book for database.

Timothy Culp says

After reading this book, I never want to ever see boyce codd normal form again. But important concepts, even today.

Anoopjohnson says

A great book. Some of the things are outdated or could be taken away, but most of the content is very relevant and explained well. I wish there were more exercises and the solutions were available.

Samantha says

I found this book the most helpful when reading it and then looking over the Stanford videos that one of the authors did online. The videos make the book clearer.