## Book Review

## Advanced Data Management

Lena Wiese
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Data Management is a traditional concept and has a strong fundametal footing. Most of the concepts in this field are extensively addressed by researchers in the last few decades. If there is a new book on data management people may ask the need for a newer one where we have many other sources. But data management practices have undergone radical changes in respect to tools, technologies, platforms and storage. Thus new books reflecting such changes are required to understand the paradigm shift in this domain. One such book is the Advanced data managment produced by Lena Wiese.

This book has fifteen chapters produced in four parts. In the first part 1, introduction, the background has briefly discussed the database concepts includind database properties, components, design, entity-relationship model ad UML. The basics given in this chapter is supported with simple illustrations. In the second chapter on RDBS, the author has explained relational data model, schemas, normalization, concurrency etc. These concepts are detailed with applications in different environments. Numerous examples are also added in the text. In the third chapter the relational data model is highlighted with the statements of their merits. The problems of RDBMS are enumerated with typical solutions for them which is a unique feature of this book. One useful addition in this chapter is a discussion on new data management challenges.

In the fourth chapter on graph databases, the author has explained the graph data structure, theory, matrices, list etc. The model of the graph database with application for social networks is described. The next chapter on XML databases is more significant as XML forms is used widely across applications. This chapter is a highly detailed one with enough supporting arguments. Another chapter on document databases provide a glimpse of implementations particularly the MapReduce framework. The tools Hadoop and MapReduce are explained as their significance is well known. The data model Apache hive is detailed followed by the description of the document database MongoDB. Thus this chapter contributes to the new paradigms in database management. The next one is the column of the storage angle followed by a chapter on extensible record stores.

Object databases form the core of the discussions in the next chapter. The examples are supported for the enumeration of object orientation. The object relation mapping is elegantly explained with many illustrations. Distributed database systems, data fragmentation, replication and synchronization are adequately covered in the three subsequent chapters. The expected new database technologies and their possible implementations are well addressed in the last chapter. This book also has a detailed bibliography.

This book is the core addition in the stock of database literature for the users.

**Hathairat Ketmaneechairat**
King Mongkut's University of Technology
North Bangkok
Bangkok
Thailand