

# Advanced Databases

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Umm Al-Qura University

The following chapters from the Ramez ElMasri and Shamkant B. Navathe, Database Systems book, 6<sup>th</sup> Edition will be covered:

Chapter 9-->UML for Database Application Design

Chapter 10-->Object and Object-Relational Databases: Concepts, Models, Languages and Standards

Chapter 11-->XML: Concepts, Languages, and Standards

Chapter 12-->SQL Application Programming Using Java

Chapter 13-->SQL Web Programming Using PHP

Chapter 14-->Database Design Theory: Introduction to Normalization Using Functional and Multi-valued Dependencies

Chapter 17-->Database File Indexing Techniques, B-Trees, and B<sup>+</sup>-Trees

Chapter 18-->Introduction to Query Processing and Query Optimization Techniques

Chapter 19-->Introduction to Database Tuning and Physical Design Issues

Chapter 20-->Foundations of Database Transaction Processing

Chapter 21-->Introduction to Protocols for Concurrency Control in Databases

Chapter 22-->Introduction to Database Recovery Protocols

Chapter 24-->Advanced Database Models and Applications

Chapter 26-->Introduction to Distributed Databases