

CHAPTER 6



Database Design Using the E-R Model

The entity-relationship data model (E-R) provides a means of identifying entities to be represented in the database and how those entities are related.

An E-R design can be transformed into a set of relation schemes that represent the data in a relational database.

Bibliographical Notes

The E-R data model was introduced by [Chen (1976)]. [Thalheim (2000)] provides a detailed textbook coverage of research in E-R modeling. Basic textbook discussions are offered by [Batini et al. (1992)] and [Elmasri and Navathe (2016)]. [Davis et al. (1983)] provides a collection of papers on the E-R model.

A logical design methodology for relational databases using the extended E-R model is presented by [Teorey et al. (1986)].

The Integration Definition for Information Modeling (IDEF1X) standard [NIST (1993)] released by the United States National Institute of Standards and Technology (NIST) defined standards for E-R diagrams. However, a variety of E-R notations are in use today.

As of 2018, the current UML version was 2.5, which was released in June 2015. See www.uml.org for more information on UML standards and tools.

Bibliography

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