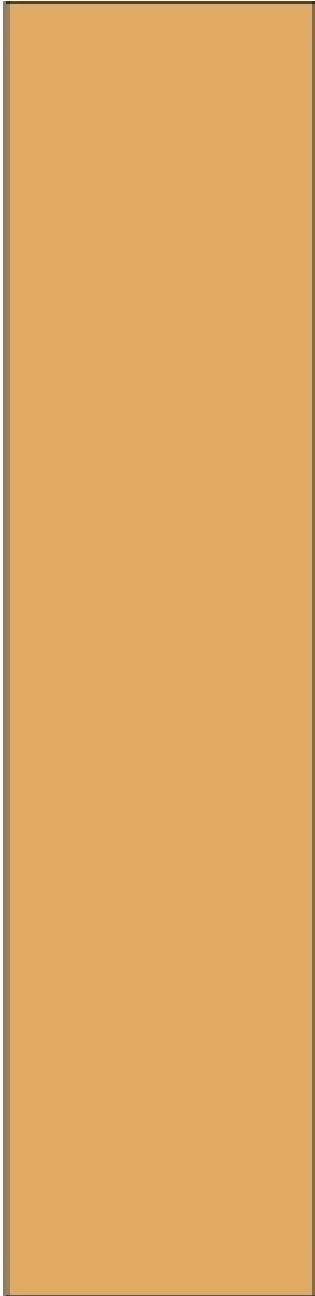

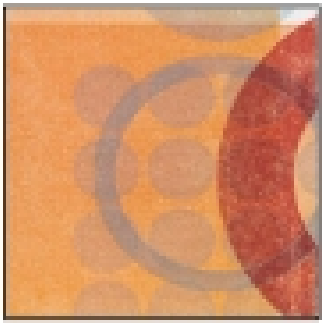


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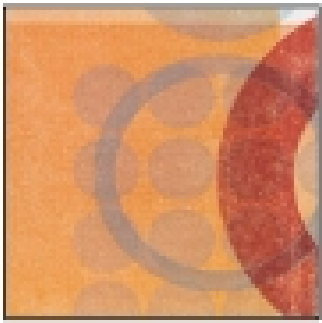


Chapter Four
**Data Modeling and the
Entity-Relationship Model**



Chapter Objectives

- **Learn the basic stages of database development**
- **Understand the purpose and role of a data model**
- **Know the principal components of the E-R data model**
- **Understand how to interpret traditional E-R diagrams**
- **Learn to construct E-R diagrams**
- **Know how to represent 1:1, 1:N, N:M, and binary relationships with the E-R model**



Chapter Objectives

(Continued)

- **Understand weak entities and know how to use them**
- **Know how to represent subtype entities with the E-R model**
- **Know how to represent recursive relationships with the E-R model**
- **Learn how to create an E-R diagram from source documents**