

**Database management Systems edition 9**  
**Chapter 3**  
**Answers to Review Questions**

1. Define each of the following terms:
  - a. Entity type A collection of entities that share common properties or characteristics.
  - b. Entity-relationship model A logical representation of the data for an organization or for a business area.
  - c. Entity instance A single occurrence of an entity type.
  - d. Attribute A property or characteristic of an entity type that is of interest to the organization.
  - e. Relationship type A meaningful association between (or among) entity types.
  - f. Identifier An attribute (or combination of attributes) that uniquely identifies individual instances of an entity type.
  - g. Multivalued attribute An attribute that may take on more than one value for a given entity instance.
  - h. Associative entity An entity type that associates the instances of one or more entity types and contains attributes that are peculiar to the relationship between those entity instances.
  - i. Cardinality constraint Specifies the number of instances of one entity that can (or must) be associated with each instance of another entity.
  - j. Weak entity An entity type whose existence depends on some other entity type.
  - k. Identifying relationship The relationship between a weak entity type and its owner.
  - l. Derived attribute An attribute whose values can be calculated from related attribute values.
  - m. Multivalued attribute See letter g.
  - n. Business rule A statement that defines or constrains some aspect of the business.
  
2. Match the following terms and definitions:
  - i composite attribute
  - d associative entity
  - b unary relationship
  - j weak entity
  - h attribute
  - m entity
  - e relationship type
  - c cardinality constraint
  - g degree
  - a identifier
  - f entity type
  - k ternary
  - l bill-of-materials