11ED
Glossary

Chapter 4

binary relationship	An ER term for an association between two entities. For example, PROFESSOR teaches COURSE.
cardinality	A property that assigns a specific value to connectivity and expresses the range of allowed entity occurrences associated with a single occurrence of the related entity.
composite attribute	An attribute that can be further subdivided to yield additional attributes. For example, a phone number such as 615-898-2368 may be divided into an area code 615, an exchange number 898, and a four-digit code 2368. Compare to simple attribute.
composite identifier	In ER modeling, a key composed of more than one attribute.
connectivity	The classification of the relationship between entities. Classifications include 1:1, 1:M, and M:N.
derived attribute	An attribute that does not physically exist within the entity and is derived via an algorithm. For example, the Age attribute might be derived by subtracting the birth date from the current date.
existence-dependent	A property of an entity whose existence depends on one or more other entities. In such an environment, the existence-independent table must be created and loaded first because the existence-dependent key cannot reference a table that does not yet exist.
existence-independent	A property of an entity that can exist apart from one or more related entities. Such a table must be created first when referencing an existence-dependent table.
identifiers	In an ERM, unique names of each entity instance. In the relational model, such identifiers are mapped to primary keys in tables.
identifying relationship	A relationship in which related entities are existence-dependent. Also called a strong relationship or strong identifying relationship because the dependent entity's primary key contains the primary key of the parent entity.
iterative process	A process based on repetition of steps and procedures.
mandatory participation	A relationship in which one entity occurrence must have a corresponding occurrence in another entity. For example, an EMPLOYEE works in a DIVISION.
multivalued attributes	An attribute that can have many values for a single entity occurrence. For example, an EMP_DEGREE attribute might store the string ?BBA, MBA, PHD? to indicate three different degrees held.
non-identifying relationship	A relationship in which the primary key of the dependent entity does not contain the primary key of the related parent entity.
optional attribute	In ER modeling, an attribute that does not require a value; therefore, it can be left empty.
optional participation	In ER modeling, a condition in which one entity occurrence does not require a corresponding entity occurrence in a particular relationship.
participants	An ER term for entities that participate in a relationship. For example, in the relationship ?PROFESSOR teaches CLASS,? the teaches relationship is based on the participants PROFESSOR and CLASS.
recursive relationship	A relationship found within a single entity type. For example, an EMPLOYEE is married to an EMPLOYEE or a PART is a component of another PART.
regular entity	An entity that is existence-independent, that is, it can exist apart from all of its related entities. Also called a strong entity.
relational	The organization of a relational database as described by the database administrator.

schema	
relationship degree	The number of entities or participants associated with a relationship. A relationship degree can be unary, binary, ternary, or higher.
required attribute	In ER modeling, an attribute that must have a value. In other words, it cannot be left empty.
simple attribute	An attribute that cannot be subdivided into meaningful components. Compare to composite attribute.
single-valued attribute	An attribute that can have only one value.
strong (identifying) relationship	A relationship that occurs when two entities are existence-dependent; from a database design perspective, this relationship exists whenever the primary key of the related entity contains the primary key of the parent entity.
strong entity	An entity that is existence-independent, that is, it can exist apart from all of its related entities. Also called a regular entity.
ternary relationship	An ER term used to describe an association between three entities. For example, a CONTRIBUTOR contributes money to a FUND from which a RECIPIENT receives money.
unary relationship	An ER term used to describe an association within an entity. For example, a COURSE might be a prerequisite to another COURSE.
weak entity	An entity that displays existence dependence and inherits the primary key of its parent entity. For example, a DEPENDENT requires the existence of an EMPLOYEE.
weak relationship	A relationship in which the primary key of the related entity does not contain a primary key component of the parent entity. Also known as a non-identifying relationship.