

2.1

attribute: a descriptive characteristic of some object or relationship

domain: a set of values from which an attribute value can be drawn from

entity: an object in the world

relationship: an association between two or more entities

entity set: an abstract group of entities that are all described by the same attributes

relationship set: an abstract group of all relationships between two or more entities

one-to-many relationship: a constraint on relationship sets indicating that one entity X can be associated with many entities Y and each entity Y can be associated with at most one entity X

many-to-many relationship: a constraint on relationship sets indicating that each entity X can be associated with many entities Y and vice versa

participation constraint: a constraint on relationship sets indicating whether every entity in an entity set must be involved in some relationship in the set

overlap constraint: a constraint on class hierarchies indicating whether entities can be part of more than one subclass

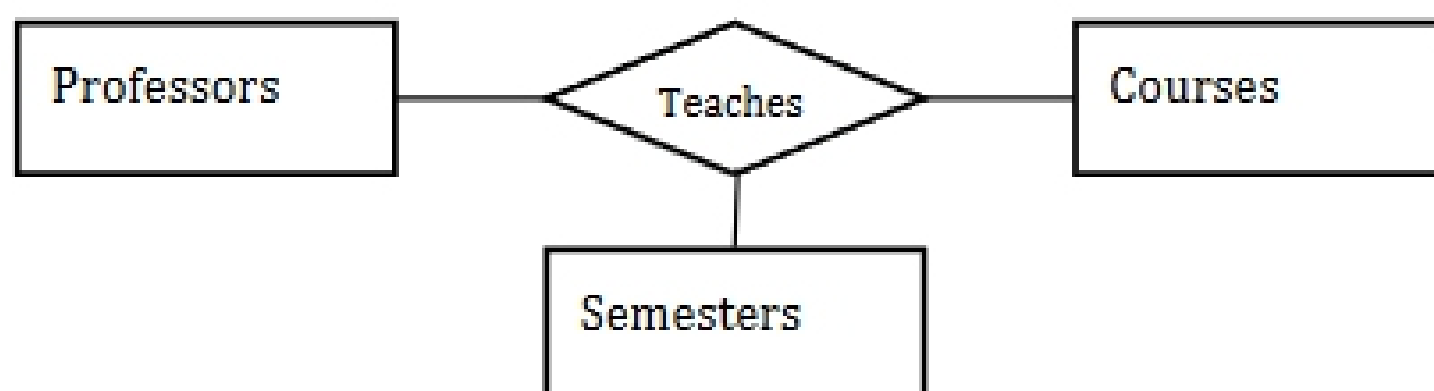
covering constraint: a constraint on class hierarchies indicating whether every entity in the superclass must be included in at least one subclass

weak entity set: a set of entities that are uniquely identifiable only in conjunction with an identifying owner entity in a separate entity set

aggregation: a "virtual" entity set formed from a relationship set and the entity sets involved in the relationship set

2.2

Professors can teach the same course in several semesters and each offering must be recorded



Professors can teach the same course in several semesters and only the most recent needs to be recorded



Every professor must teach some course



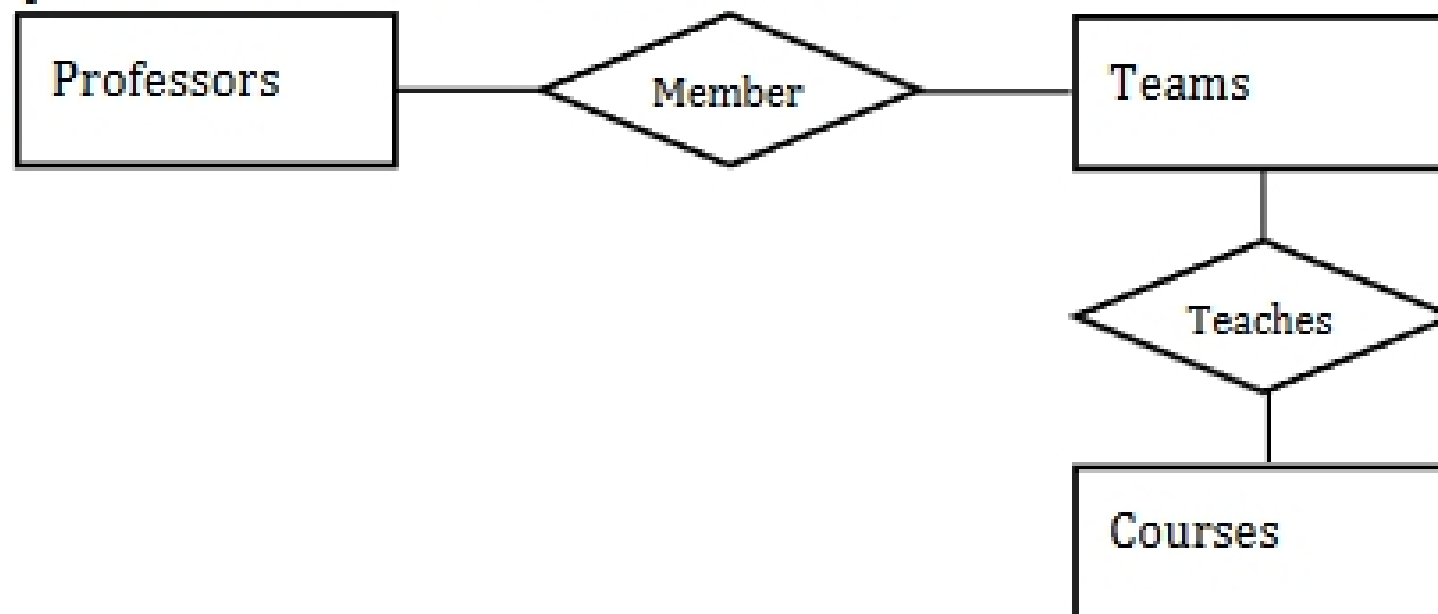
Every professor teaches exactly one course



Every professor teaches exactly one course and every course must be taught by some professor



Certain courses can be taught by a team of professors jointly, but it is possible that no one professor in a team can teach the course



2.3

