Quadrant II

Programme: B.Sc.
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Paper Title: Database Management System

Unit II: Conceptual design and Entity Relationship model

Module Name: Entity versus attribute, Entity versus relationship, Binary versus ternary Relationship, aggregation versus ternary relationships.

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Use of Entity Set vs. Attributes

The use of an entity set or attribute depends on the structure of the real-world enterprise that is being modelled and the semantics associated with its attributes. It leads to a mistake when the user use the primary key of an entity set as an attribute of another entity set. Instead, he should use the relationship to do so. Also, the primary key attributes are implicit in the relationship set, but we designate it in the relationship sets.

- Rule of thumb: composite attributes should be modelled as entity sets if we care about their structure
- Rule of thumb: multi-valued attributes should be modelled as entity sets

Use of Entity Set vs. Relationship Sets

It is difficult to examine if an object can be best expressed by an entity set or relationship set. To understand and determine the right use, the user need to designate a relationship set for describing an action that occurs in-between the entities. If there is a requirement of representing the object as a relationship set, then it's better not to mix it with the entity set.

Binary relationships: is when two entities participate and is the most common relationship degree.

Ternary relationships: is when three entities participate in the relationship.

Aggregation is a process in which a single entity alone is not able to make sense in a relationship so the relationship of two entities acts as one entity.