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Course Name: **A Level (1ˢᵗ Sem)**   Subject : **Introduction to DBMS**
Topic: **ERD – Degree of Relationship Set and Mapping**   Date: **07-Apr-2020**
          Cardinality (Part 5)

ERD - Degree of Relationship Set
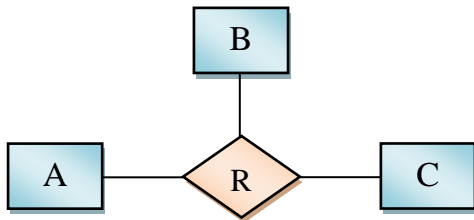
➕ **Degree of relationship set**

It means the number of entity associated or participated in relationship set. The degree of most of relationship set are binary (2); however it can be unary, ternary or n-ary.
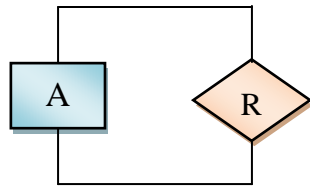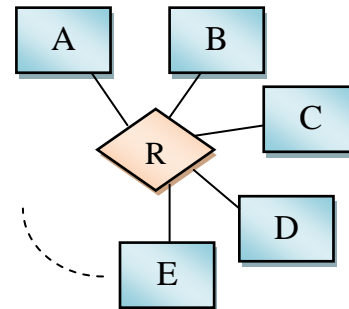

1. Unary Relationship Set

2. **Binary Relationship Set**

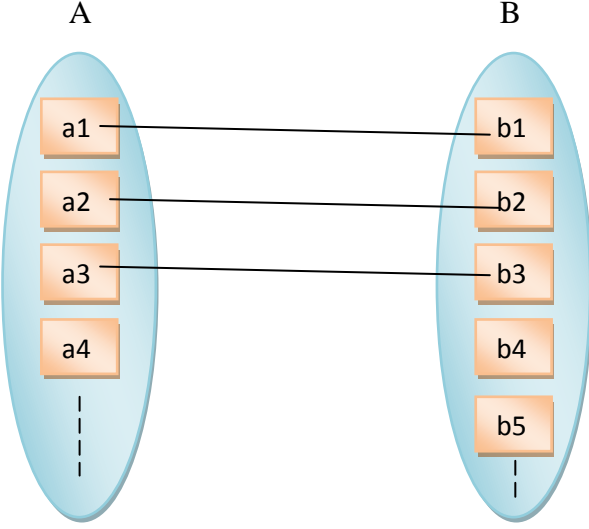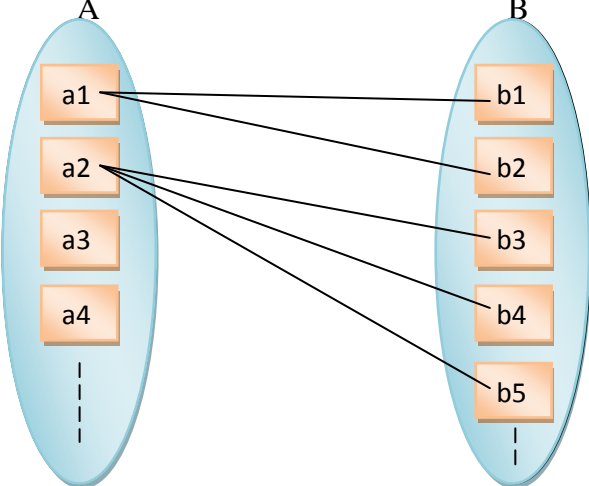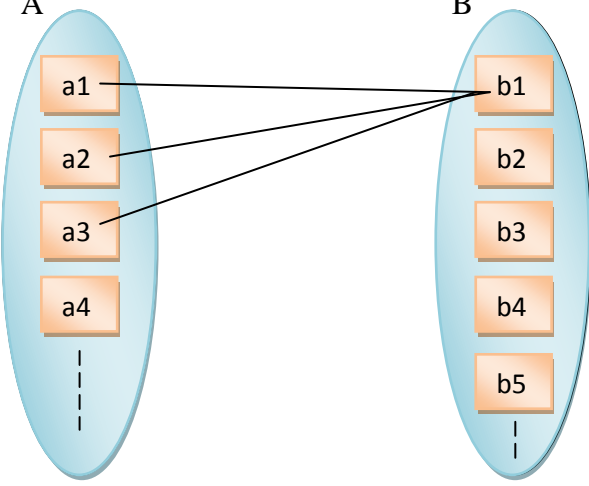3. **Ternary Relationship Set**

4. **n-ary Relationship Set**

ERD – Mapping Cardinality

Mapping Cardinality or Cardinality Ratio express the number of entity to which another entity can be associated via relationship set. It refers to the relationship between tables.

Suppose a binary relationship set R between two entity A ad B, then the mapping cardinality or cardinality ration must be one of the following:

- 1:1
- 1:N
- N:1
- N:M

1:1 (One to One)

An entity in entity set A is associated with at most one entity in entity set B and an entity in entity set B is associated with at most one entity in entity set A, then it is called **1:1 Mapping Cardinality or cardinality ratio.**

Entity set A (a1, a2, a3, a4, …)

Entity set B (b1, b2, b3, b4, b5, …)

1:N (One to Many)

An entity in A is associated with any number of entity in B and an entity in B however can be associated with at most one entity in A, it is called **1:N mapping cardinality or cardinality ratio.**

Entity set A (a1, a2, a3, a4, …)

Entity set B (b1, b2, b3, b4, b5, …)

N:1 (Many to One)

An entity in A is associated with at most one entity in B, and an entity in B however can be associated with any number of entity in A, it is called **N:1 mapping cardinality or cardinality ratio.**

Entity set A (a1, a2, a3, a4, …)

Entity set B (b1, b2, b3, b4, b5, …)

✛ N:M (Many to Many)

An entity in A is associated with any number of entity in B and an entity in B is associated with any number of any entity in A, it is called **N:M mapping cardinality or cardinality ratio.**

Entity set A (a1, a2, a3, a4, …)

Entity set B (b1, b2, b3, b4, b5, …)
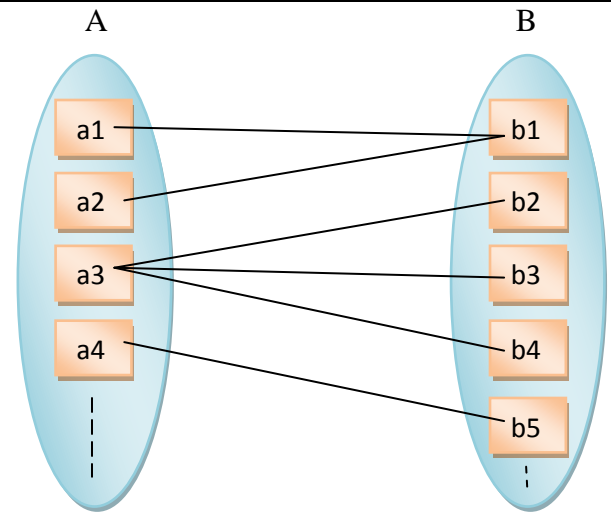
Exercise:

1. **Can an entity relate with itself? If yes, explain with example.**

2. **How can you find the degree of any relationship set?**