Tutorial 1: Conversion of ER to Schema (Tables)

Rules:

1. A strong entity set reduces to a schema with the same attributes. A weak entity set becomes a table that includes a column for the primary key of the identifying(associated) strong entity set

2. A many to many relationship set is represented as a schema with the primary keys of the two participating entity sets, and any descriptive attributes of the relationship set.

3. Many to one and one to many relationship sets can be represented by adding an extra attribute to the "many" side, containing the primary key of the "one" side

4. For one to one relationship sets, either side can be chosen to act as the "many" side l that is, extra attributed can be added to either of the tables corresponding to the two entity sets

5. Composite attributes are flattened out by creating separate attribute for each component attribute

6. A multivalued attribute M of an entity E is represented by a separate schema EM l Schema EM has attributes corresponding to the primary key of E and an attribute corresponding to multivalued attribute M

7. Representing Specialization via Schemas n Method
   1: l Form a schema for the higher-level entity
   2: Form a schema for each lower level entity set, include primary key of higher-level entity set and local attributes.
   Method 2: Form a schema for each entity set with all local and inherited attributes

8. To represent aggregation, create a schema containing

- primary key of the aggregated relationship,
- the primary key of the associated entity set
- any descriptive attributes.

Primary Keys.

• Strong entity set. The primary key of the entity set becomes the primary key of the relation.

• Weak entity set. The table, and thus the relation, corresponding to a weak entity set includes The attributes of the weak entity set

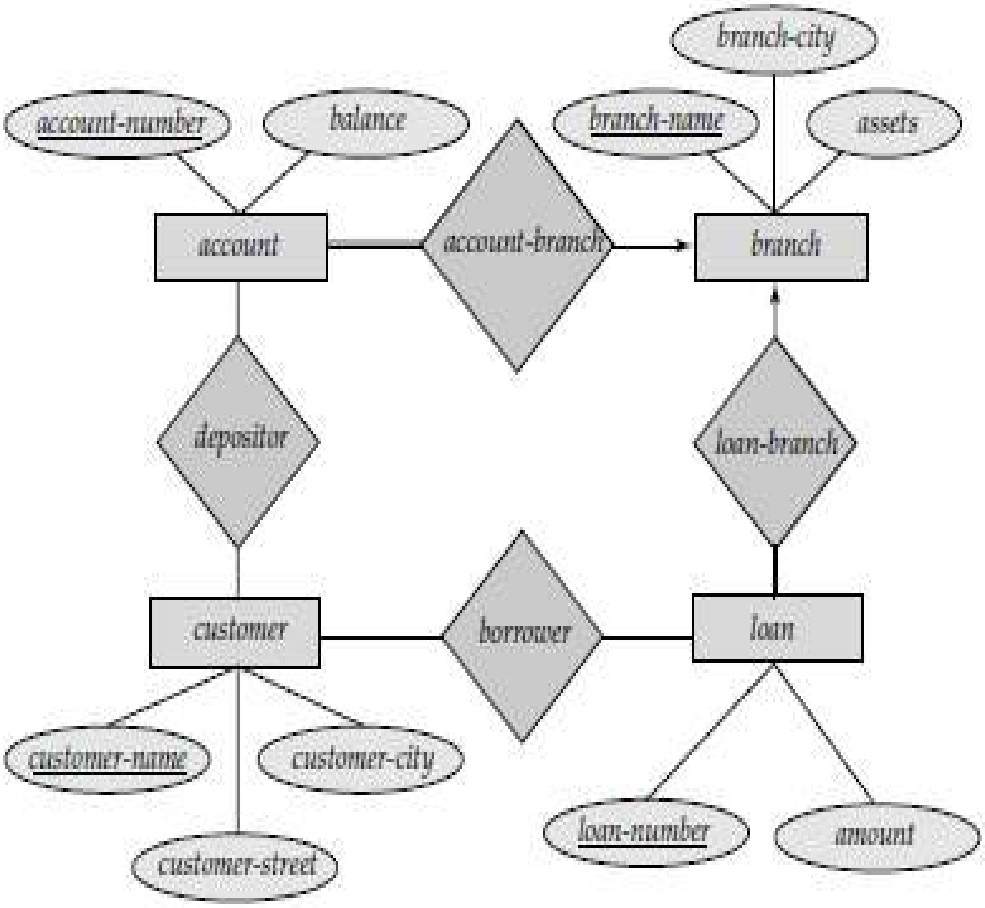
- The primary key of the strong entity set on which the weak entity set depends

The primary key of the relation consists of the union of the primary key of the strong entity set and the discriminator of the weak entity set.

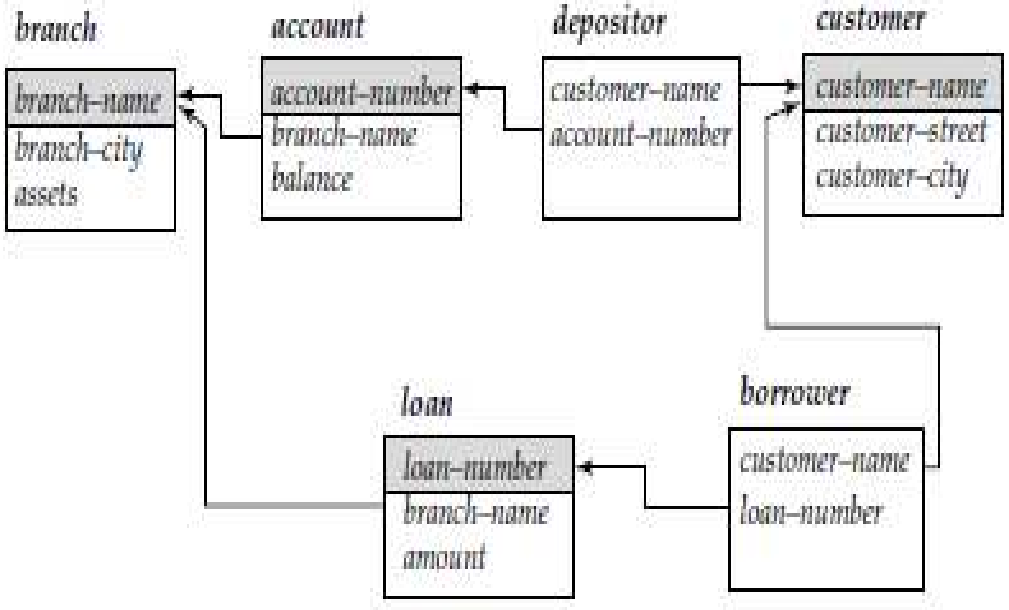
• Relationship set. The union of the primary keys of the related entity sets becomes a superkey of the relation. If the relationship is many-to-many, this superkey is also the primary key.

• Combined tables. The primary key of the "many" entity set becomes the primary key of the relation (that is,if the relationship set is many to one from A to B, the primary key of A is the primary key of the relation). For one-to-one relationship sets, the relation is constructed like that for a many-to-one relationship set. However, we can choose either entity set's primary key as the primary key of the relation, since both are candidate keys.

Example : ER Diagram



Schema Diagram.



Convert the ER into tables and draw schema diagram.