E-R Model ERD

graphical representation.

1. **Rectangle** - identify entities, think nouns (person, place, thing).
   1. Identify attributes in the table rectangle
   2. Underline - primary key
2. **Diamond** - represents a relationship type of how these tables are related
   1. Relation Type is identified by 1, M, N

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Database design

Discovery.

Discover entities, relationships, and attributes.

Step	Activity
1A	Identify entities, relationships, and attributes in interviews.
1B	Draw ER diagram.
1C	List standard attribute types in glossary.
1D	Document names, synonyms, and descriptions in glossary.

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Database design

Discovery.

1. Start with attributes
   a. List all the ones you can see
   b. List all the ones you can guess
2. Identify entities
3. Identify relationships (1:1, 1:M, M:M)
4. Put all attributes in the correct entity or relationship

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Convert ERD to SCHEMA (create table statements).

One-to-one relationship

- The main table is called the **S**ubject.
- The other table is called the **T**arget.
- The primary key from **S** becomes the foreign primary key in **T**

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Convert ERD to SCHEMA (create table statements).

One-to-many relationship

- The 'One' table is the the **S**ubject.
- The 'Many' table is called the **T**arget.
- The primary key from **S** becomes the foreign primary key in **T**

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Convert ERD to SCHEMA (create table statements).

Many-to-many relationship

- A new Relationship table is created to connect the two tables together.
- Choose the "main" table to be the **S**ubject.
- The other table becomes the **T**arget.
- Create the relationship table **R** with the naming convention of tblSubjectTarget

Continued …

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Convert ERD to SCHEMA (create table statements).

Many-to-many relationship (cont..)

- The primary key tor table **S** becomes a foreign key in table **R**
- The primary key tor table **T** becomes a foreign key in table **R**
- Many times the combination of the two foreign keys becomes the primary key for table **R**
- Table R may have more fields than just foreign keys.

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