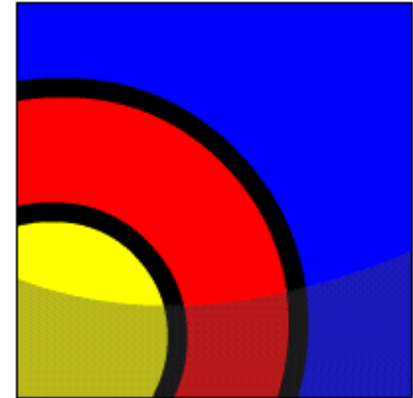


Relationship Types

What Will I Learn?

In this lesson, you will learn to:

- Recognize and give examples of a one-to-one relationship
- Recognize and give examples of a one-to-many relationship
- Recognize and give examples of a many-to-many relationship
- Recognize redundant relationships and remove them from the ERD



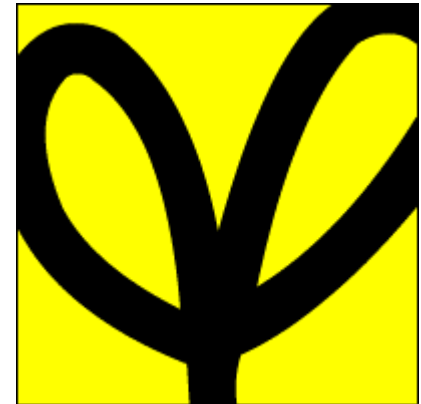


Why Learn It?

Can one PERSON own many CDs, or only one ?

Can one CD be owned by many PERSONs ?

As we refine and improve our model, we want to make sure our entity relationships correctly model our business rules. Remember, you can avoid future costly mistakes by thinking through the details early on.



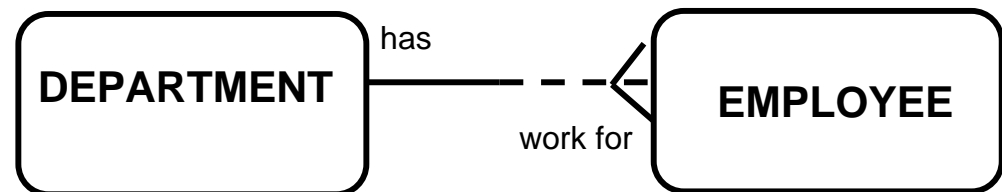
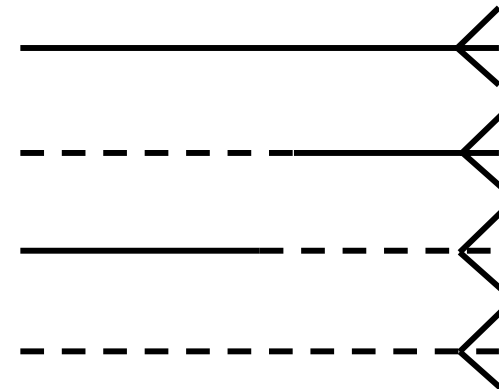
Tell Me / Show Me

One-to-Many (1:M) Relationships

The various types of 1:M relationships are most common in an ER Model. You have seen several examples already.

Relationship Types

1:M



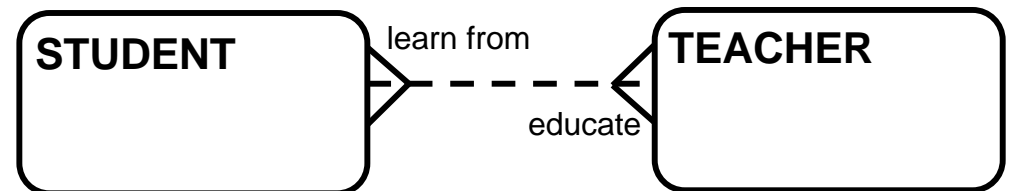
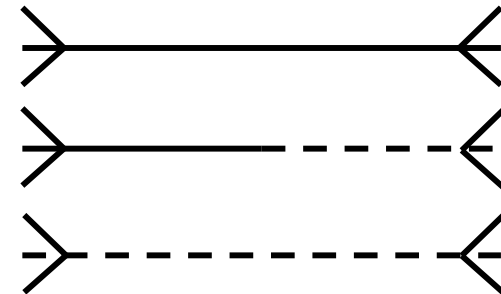
1:M Relationship

Tell Me / Show Me

Many-to-Many (M:M) Relationships

The various types of M:M relationships are common, particularly in a first version of an ER model. In later stages of the modeling process, most M:M relationships, and possibly all, will disappear.

Relationship Types M:M



M:M Relationships

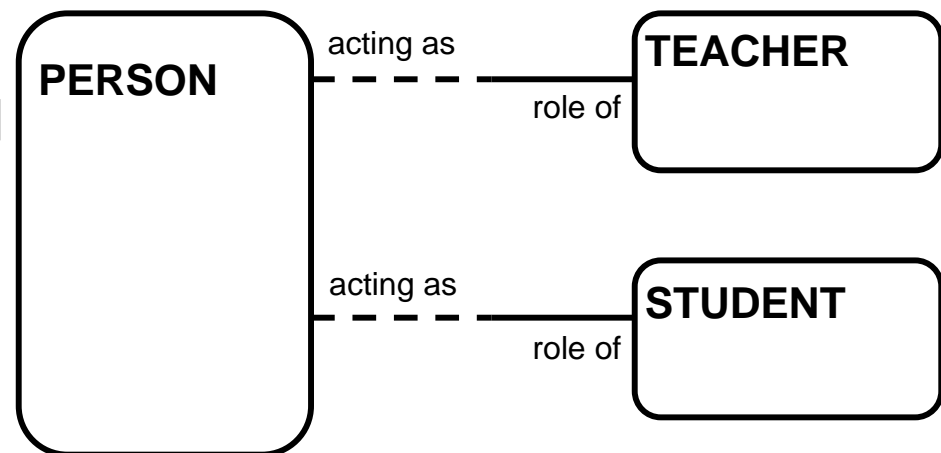
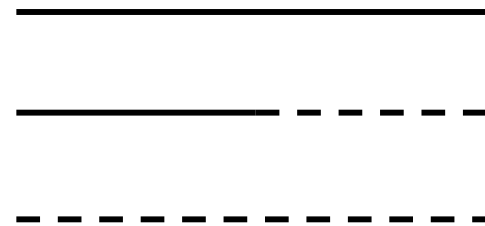
Tell Me / Show Me

One-to-One (1:1) Relationships

Usually you will find just a few of the various types of 1:1 relationships in every ER model.

Mandatory at one end of the 1:1 relationship commonly occurs when roles are modeled. See the school model.

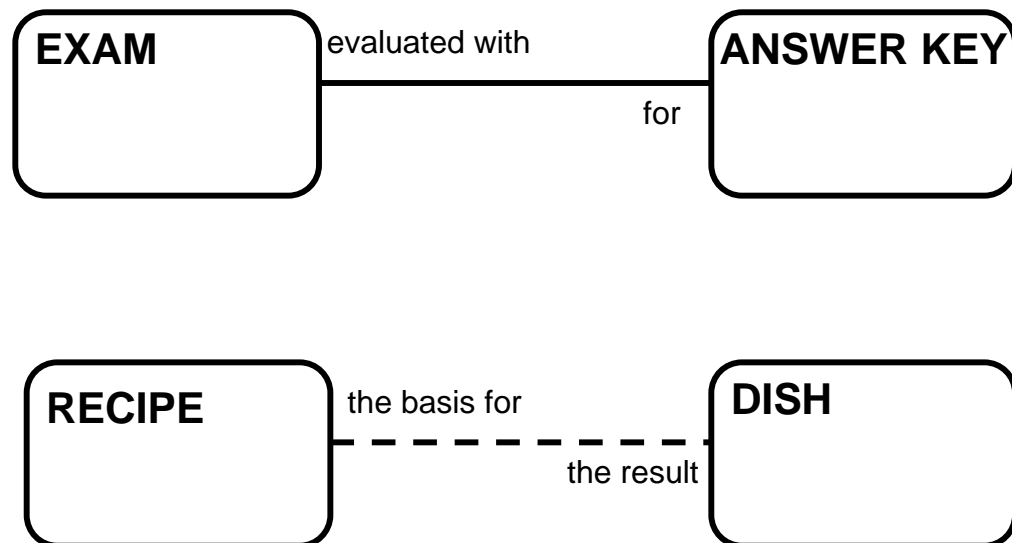
Relationship Types 1:1



1:1 Relationships

Tell Me / Show Me

1:1 relationships (of all three variations) also occur when some of the entities represent various stages in a process.



1:1 Process Relationships

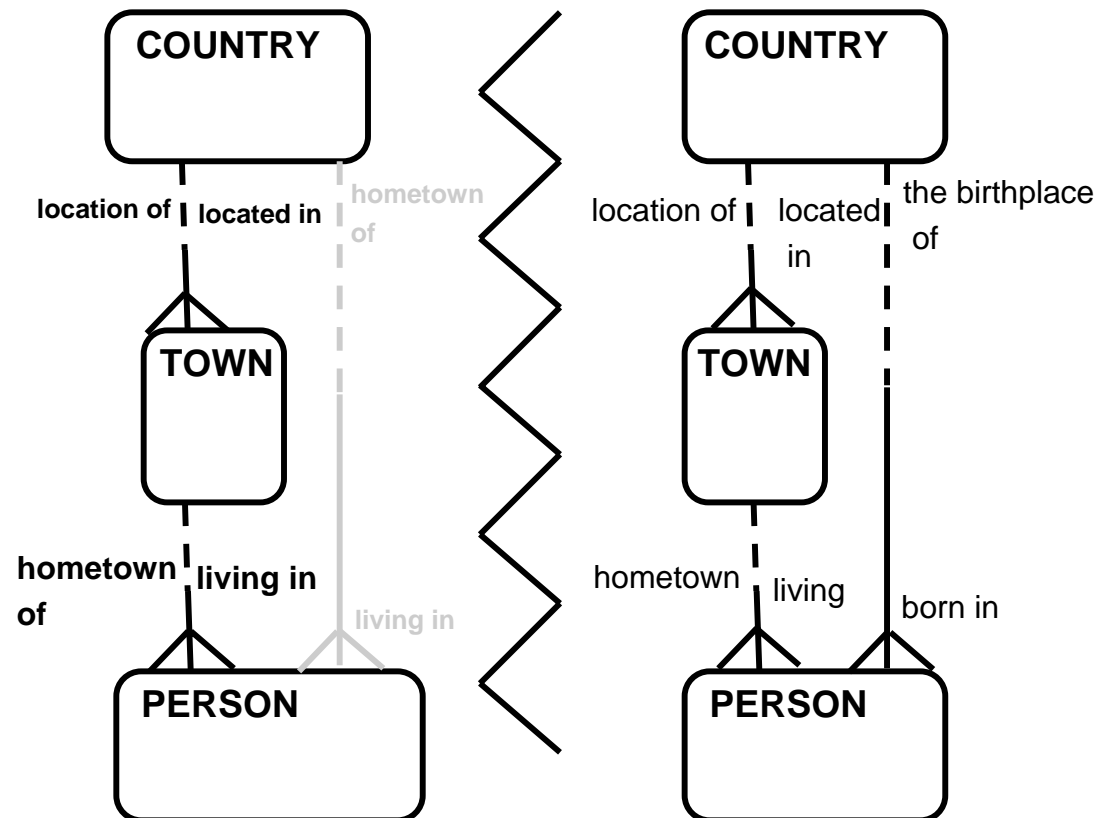
Tell Me / Show Me

Redundant Relationships

A redundant relationship can be derived from another relationship in the model.

In the example on the left, you can derive the relationship from PERSON to COUNTRY from the other two relationships, and you should remove them from the model -- as indicated on the left.

However, be careful of concluding that a relationship is redundant based on the structure alone. Read the relationships to check. The ERD on the right does not reflect a redundant relationship.



Tell Me / Show Me

Terminology

Key terms used in this lesson include:

Many-to-many (M:M)

One-to-many (1:M)

One-to-one (1:1)

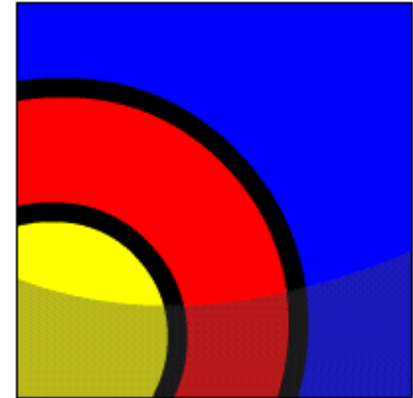
Redundant



Summary

In this lesson, you have learned how to:

- Recognize and give examples of a one-to-one relationship
- Recognize and give examples of a one-to-many relationship
- Recognize and give examples of a many-to-many relationship
- Recognize redundant relationships and remove them from the ERD





Summary

Practice Guide

The link for the lesson practice guide can be found in the course outline.

