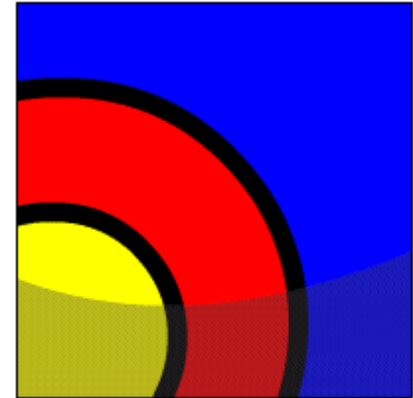


Arcs

What Will I Learn?

In this lesson, you will learn to:

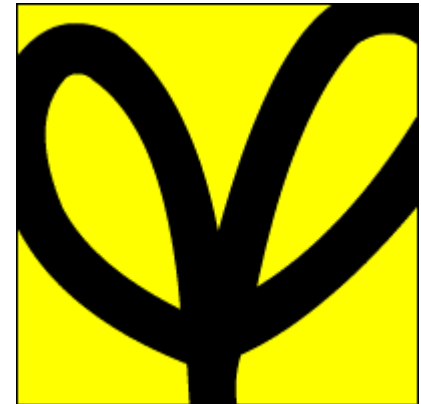
- Define the term "constraint" as it applies to data modeling
- Identify an exclusive OR relationship in a business scenario
- Diagram an arc constraint to represent an exclusive OR relationship
- Distinguish between the use of an arc and a subtype in the data model





Why Learn It?

Arcs in data modeling help designers clarify an exclusive OR across relationships. The more explicitly you can define the client's requirements, the more accurate your final implementation will be.



Tell Me / Show Me

What is a constraint ?

Every business has restrictions on which attribute values and which relationships are allowed.

These restrictions are called constraints. They may refer to a single attribute of an entity, or to relationships between entities.

We already know about several kinds of constraint, for example: every EMPLOYEE must work in one and only one DEPARTMENT.

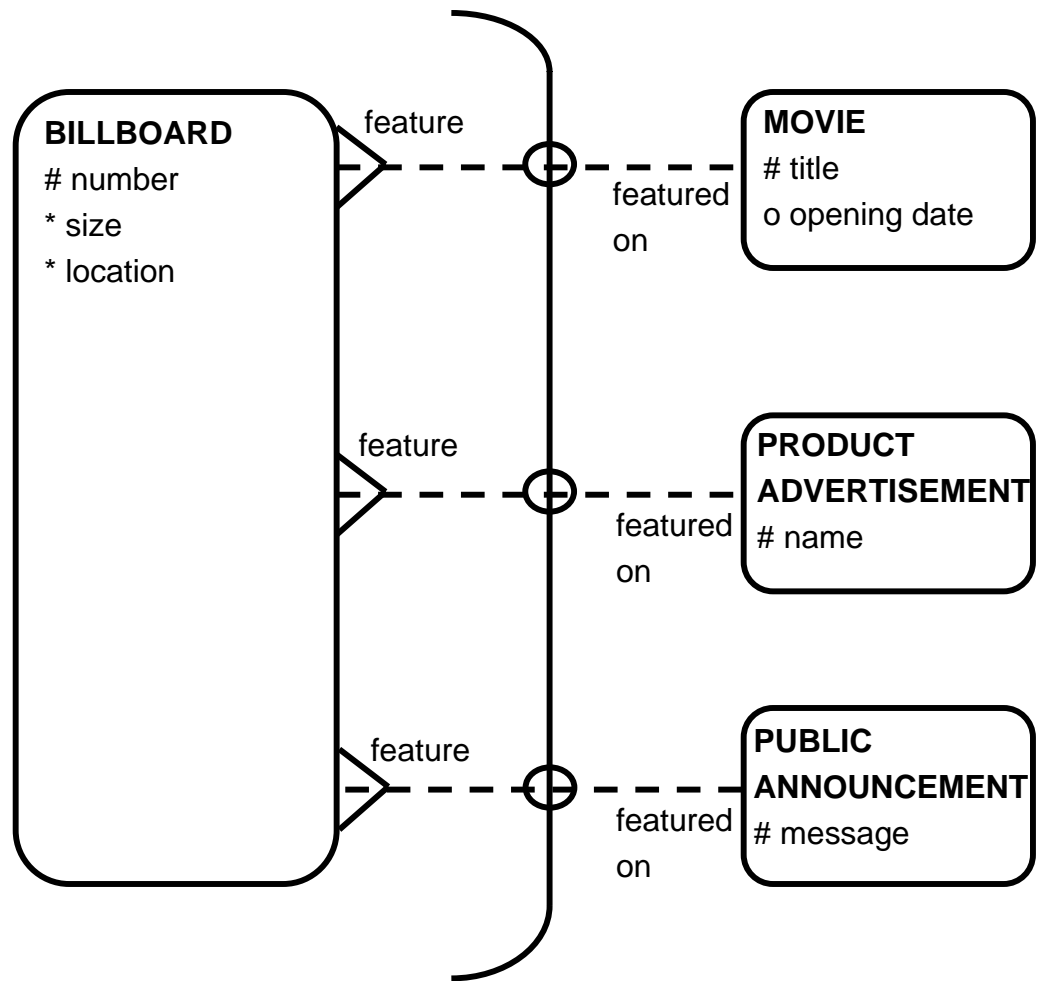
In this lesson we will see another kind of constraint: an exclusive OR constraint.

Tell Me / Show Me

Mutually exclusive relationships (sometimes called “exclusive OR” relationships) often exist.

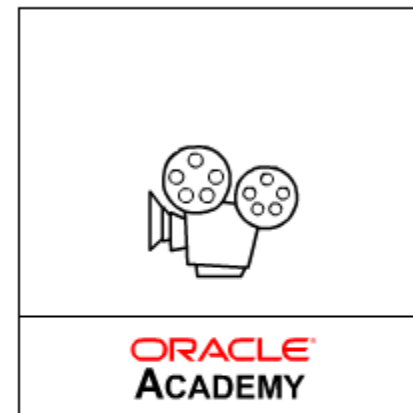
For example:

A billboard is an advertising space that can feature a movie, a product, or a public announcement. It may contain advertising about only one of these at a time. Each “feature” has its own characteristics or attributes.



Tell Me / Show Me

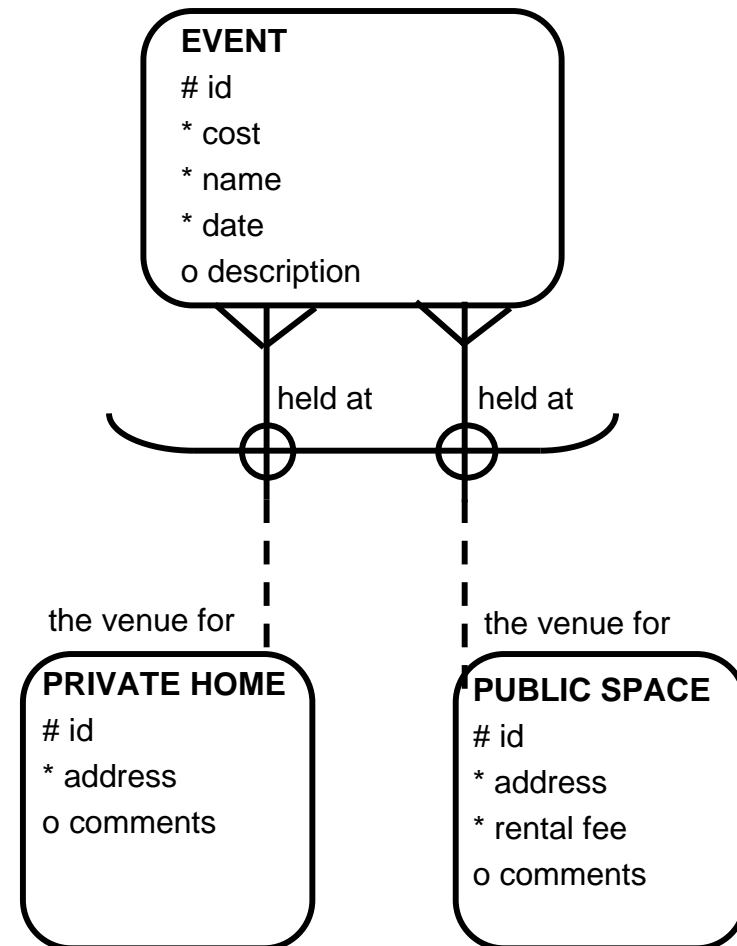
The DJ business has a mutually exclusive relationship between EVENT and VENUE.



Tell Me / Show Me

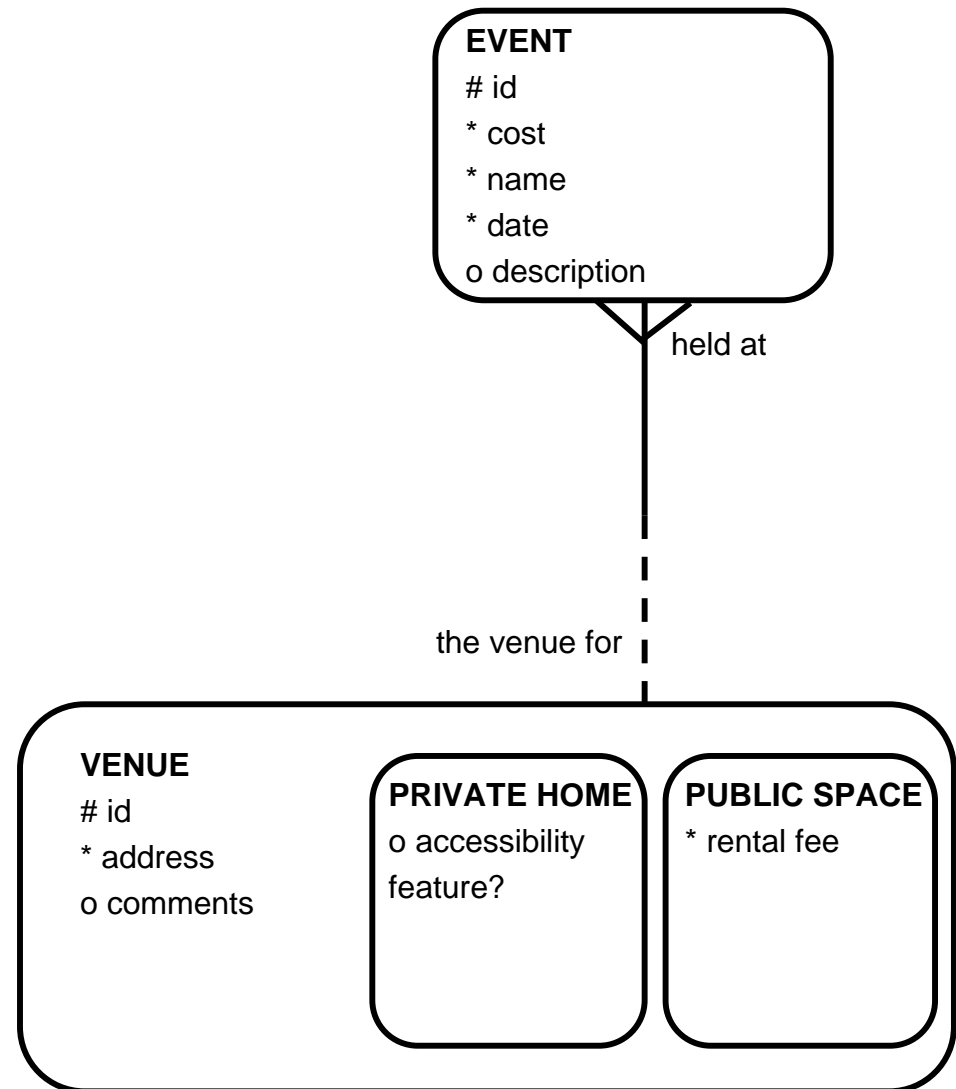
Arcs are a way to represent mutually exclusive relationships in the ERD.

The arc represents the exclusive OR relationship -- each EVENT must be held at one PRIVATE HOME or must be held at one PUBLIC SPACE, but not both.



Tell Me / Show Me

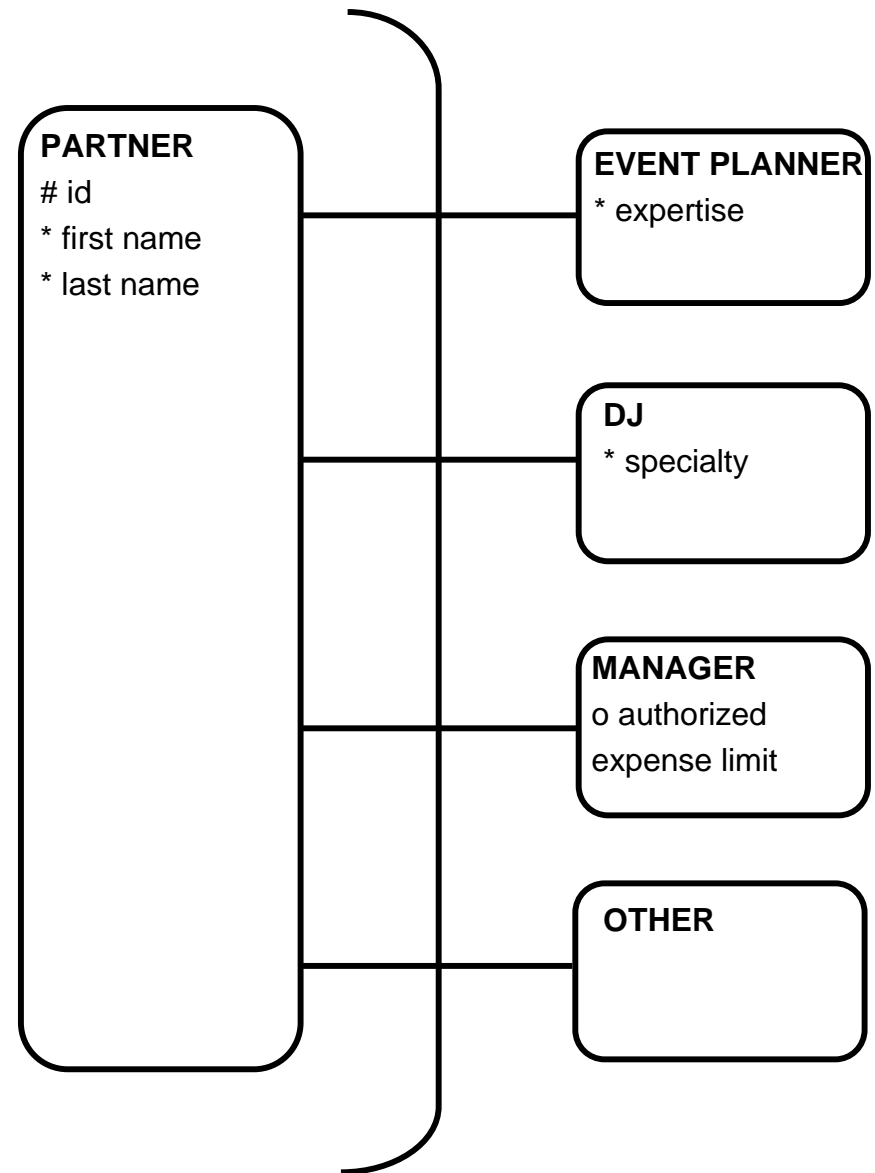
Arcs can sometimes be drawn as supertypes or subtypes.



Tell Me / Show Me

Supertypes and subtypes can sometimes be drawn as arcs.

The supertype PARTNER in the DJ model is represented as an arc in this diagram.



Tell Me / Show Me

Terminology

Key terms used in this lesson include:

Arc

Constraint

Exclusive or relationship

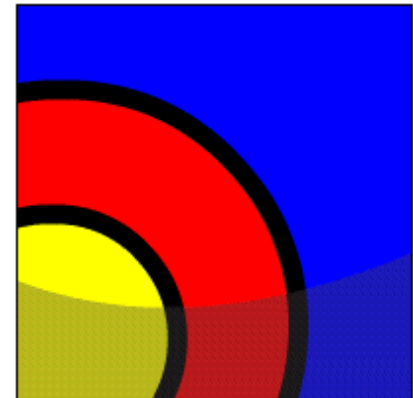
Mutually exclusive relationship



Summary

In this lesson, you have learned how to:

- Define the term "constraint" as it applies to data modeling
- Identify an exclusive OR relationship in a business scenario
- Diagram an arc constraint to represent an exclusive OR relationship
- Distinguish between the use of an arc and a subtype in the data model





Summary

Practice Guide

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

