Database Design

Resolving Many-to-Many Relationships

Objectives

This lesson covers the following objectives:

- Identify attributes which belong to many-to-many relationships
- Demonstrate the steps to resolve a many-to-many relationship using an intersection entity
- Identify the UID of an intersection entity and represent it in the entity relationship diagram

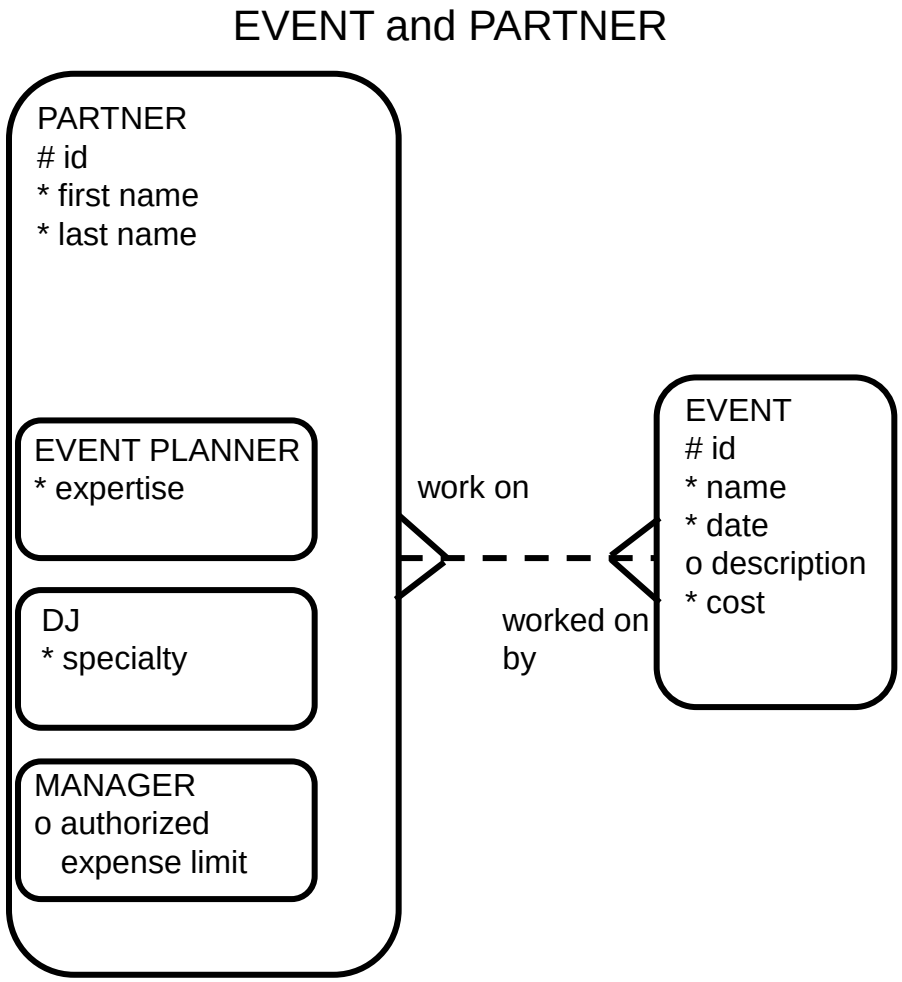
Purpose

This lesson will help you complete your model -- you may need to create new entities or new relationships based on the business needs.

It will also help you define the scope of your data model -- you only model what is of importance to the business.

Relationship Hiding an Attribute

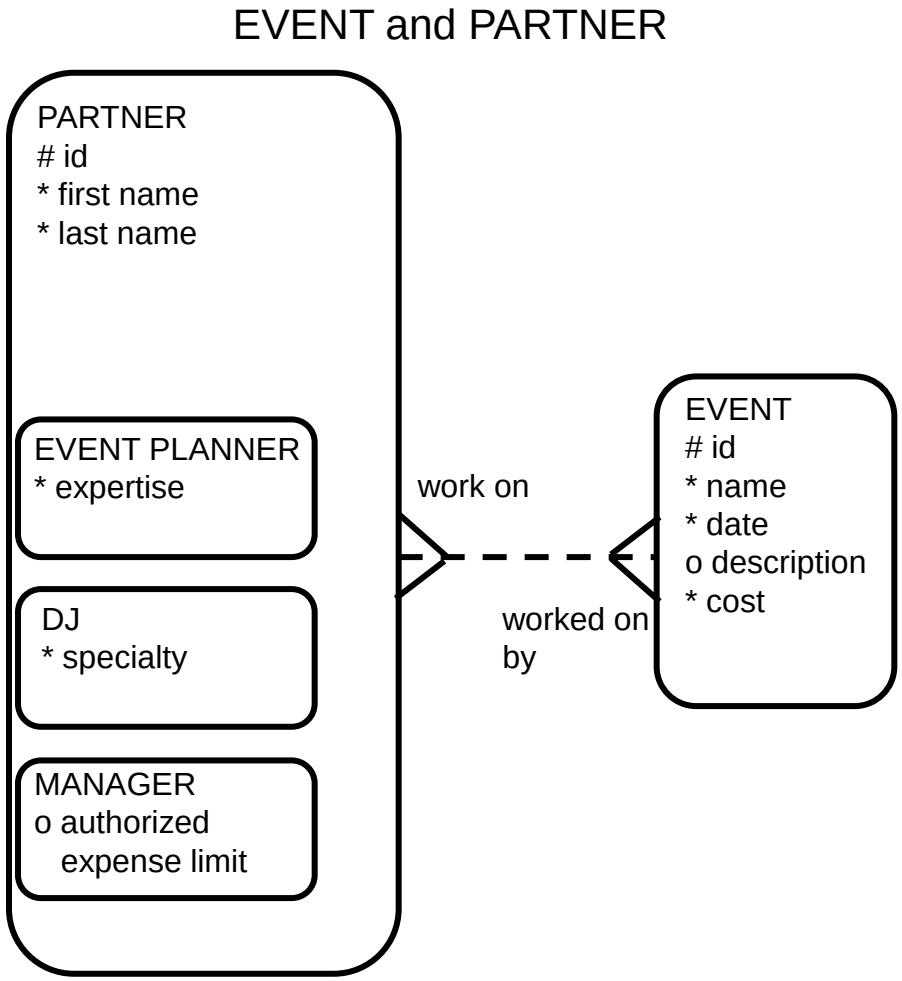
In the DJ business, each PARTNER may be assigned to work on one or more EVENTs. Each EVENT may be a job for one or more PARTNERs.



Relationship Hiding an Attribute (cont.)

When an EVENT PLANNER, a DJ, or a PROJECT MANAGER works on an EVENT, we want him to record the status of the job.

Which entity would the attribute "status" belong to?

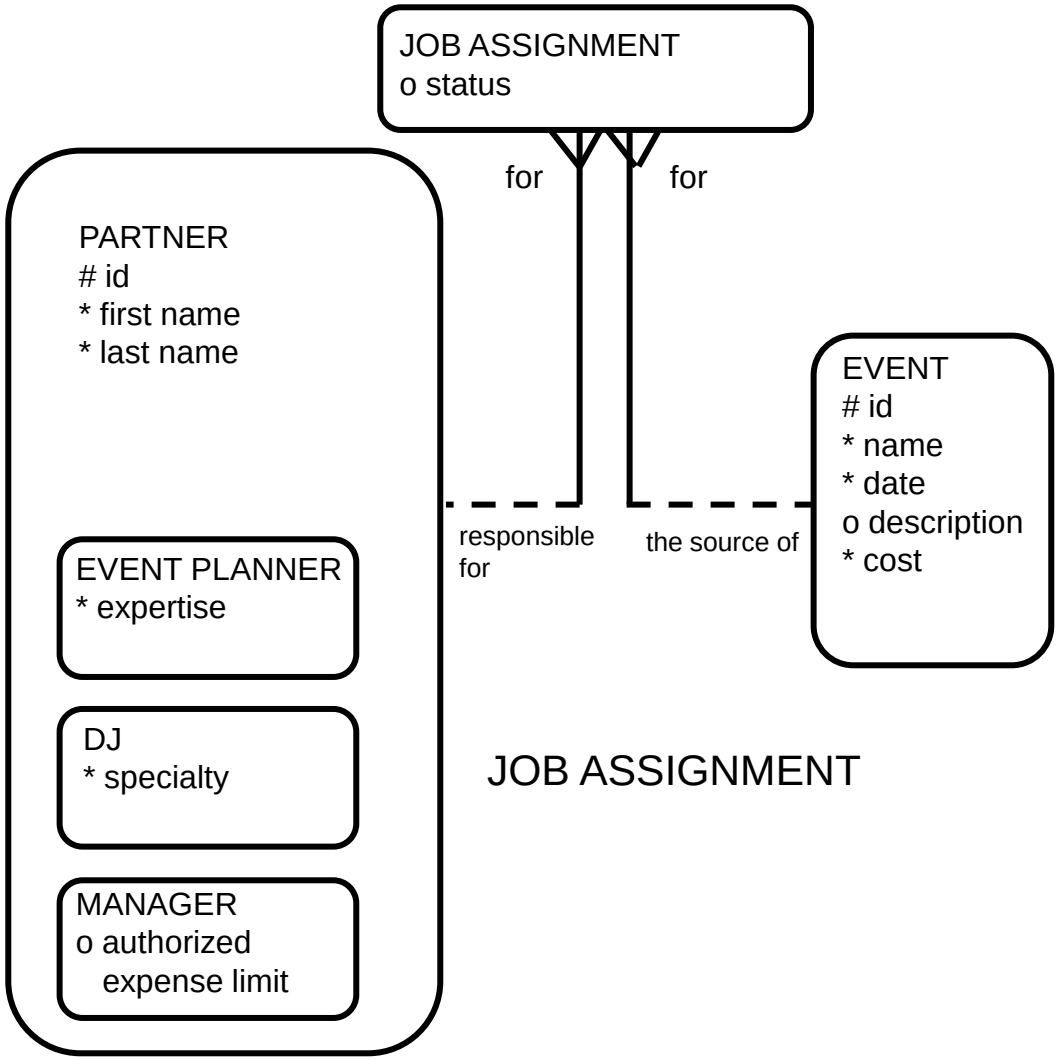


Resolution of a M:M Relationship

A third entity is needed to resolve the M:M relationship. This is called an "intersection" entity.

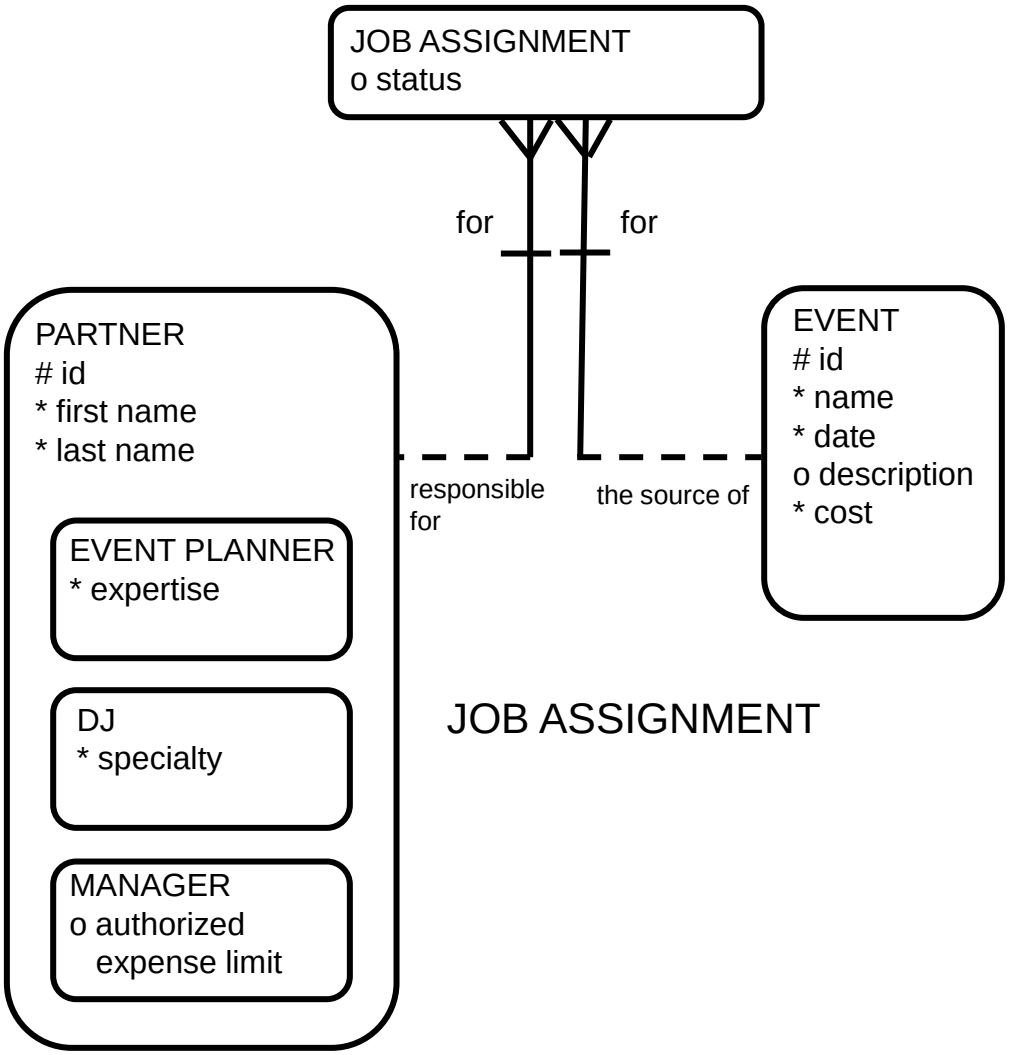
Intersection Entity

An intersection entity – JOB ASSIGNMENT – has been added, including the status attribute. The original M:M relationship has become two 1:M relationships. What would be the UID of the intersection entity?



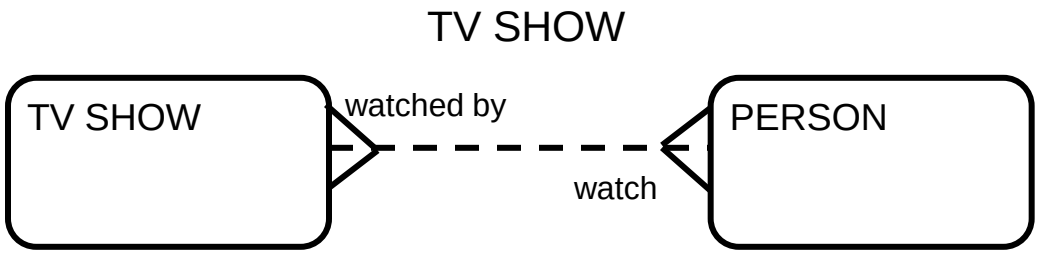
Barred Relationships

The unique identifier (UID) of the intersection entity often comes from the originating relationships and is represented by the bars. In this case, the relationships from the originating entities to the intersection entity are called "barred" relationships.

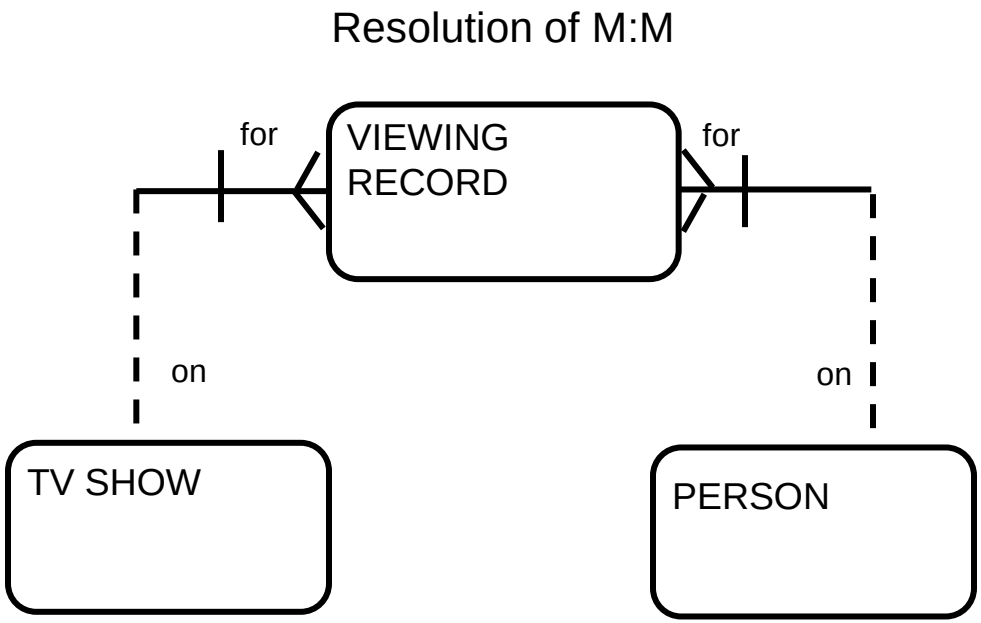


M:M Resolution Example TV Shows

Each TV show may be watched by one or more persons.

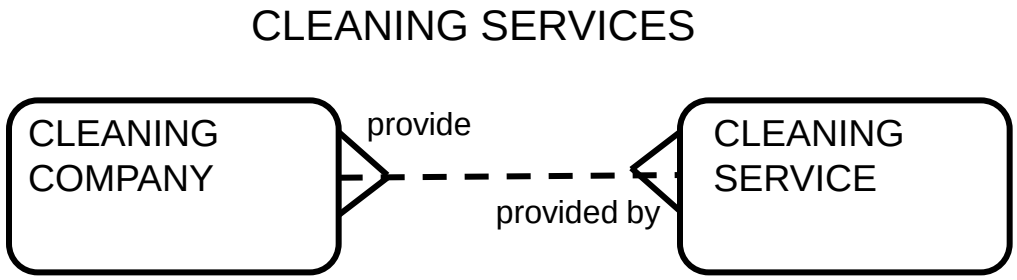


Each person may watch one or more TV shows.

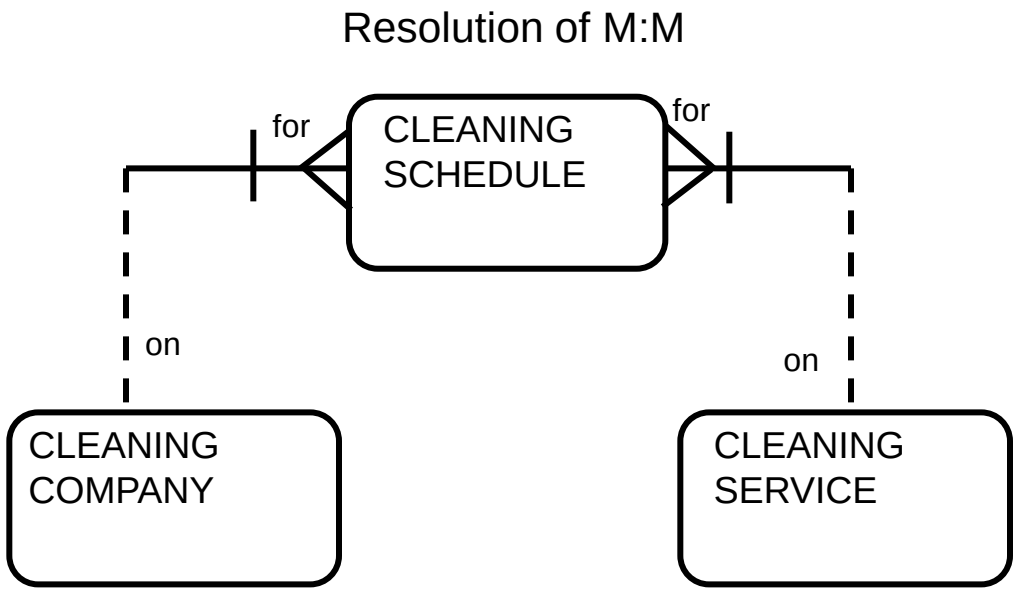


M:M Resolution Example Cleaning Services

Each company may provide one or more cleaning services.



Each cleaning service may be provided by one or more companies.



Terminology

Key terms used in this lesson included:

- Barred relationship
- Intersection entity

Summary

In this lesson, you should have learned how to:

- Identify attributes which belong to many-to-many relationships
- Demonstrate the steps to resolve a many-to-many relationship using an intersection entity
- Identify the UID of an intersection entity and represent it in the entity relationship diagram