Database Design

Drawing Conventions for Readability

Objectives

This lesson covers the following objectives:

- Apply the Oracle drawing conventions to a datamodel diagram
- Identify high volume entities in a datamodel diagram and explain their significance to the business
- Redraw a given datamodel diagram to increase clarity and readability
- Recognize the usefulness of dividing a complex ERD into a number of functional sub-diagrams

Purpose

What if all shoemakers made up their own sizes?

What if every architect used a different system to draw plans for a building?

Following the same conventions makes it easier to work as part of a team.

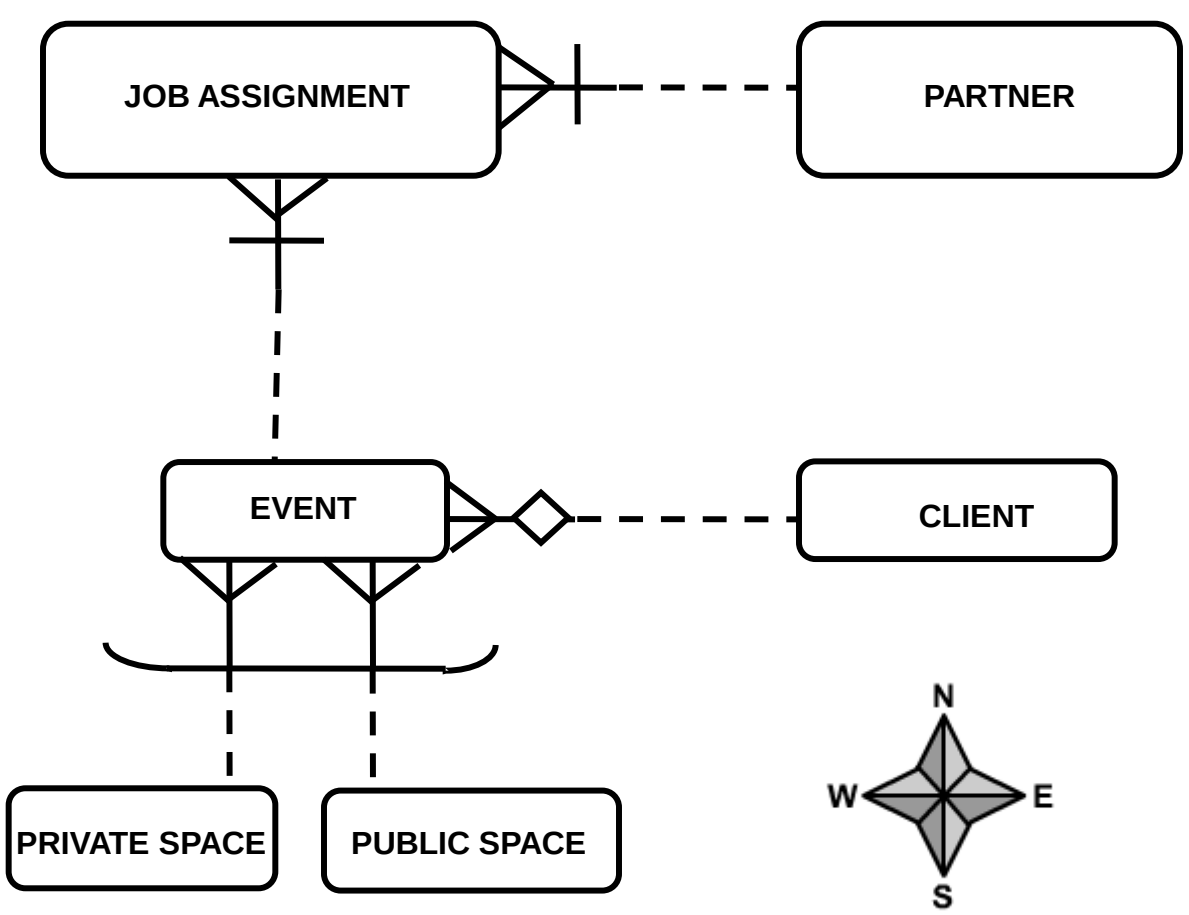
Watch the video clip. How easy is it to understand the ERD at the end?

Large ERD Drawing Conventions

The bigger and more complicated an ERD gets, the more challenging it becomes to lay out the pieces in a clear and readable format.

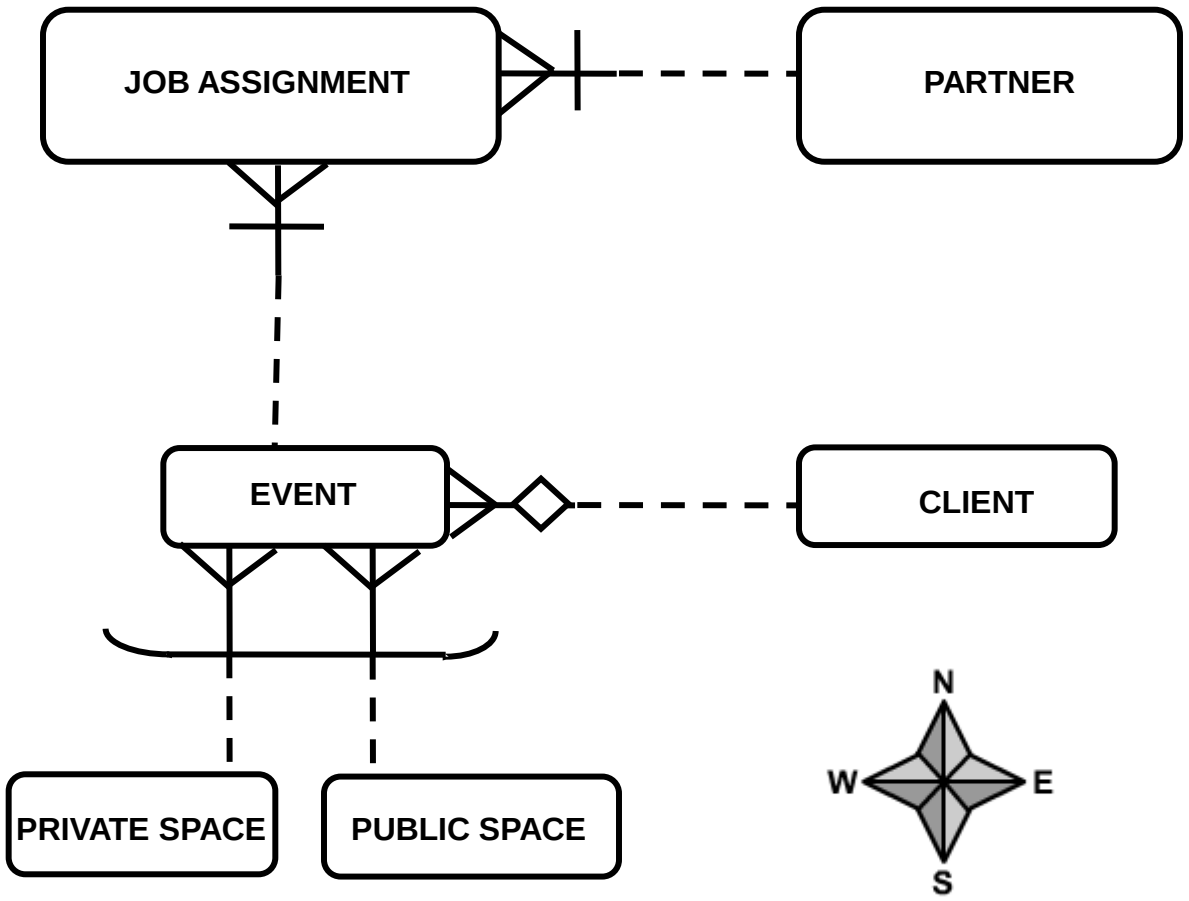
Large ERD Drawing Conventions (cont.)

Following the convention that "crows fly south and east" places the high volume entities on the upper left portion of the ERD.



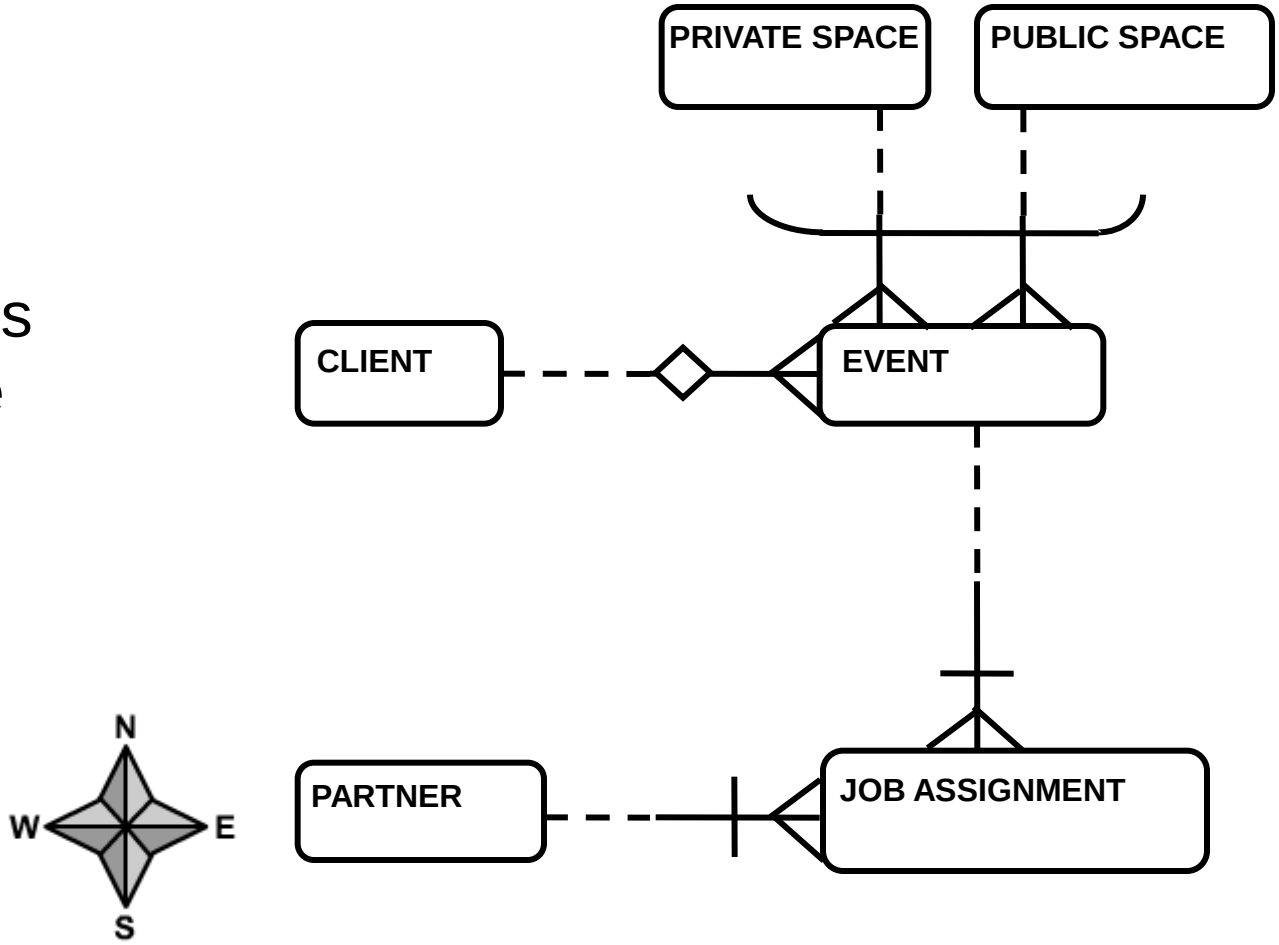
Large ERD Drawing Conventions (cont.)

High volume entities are those that would contain the highest number of instances (the child entities) compared to other entities.



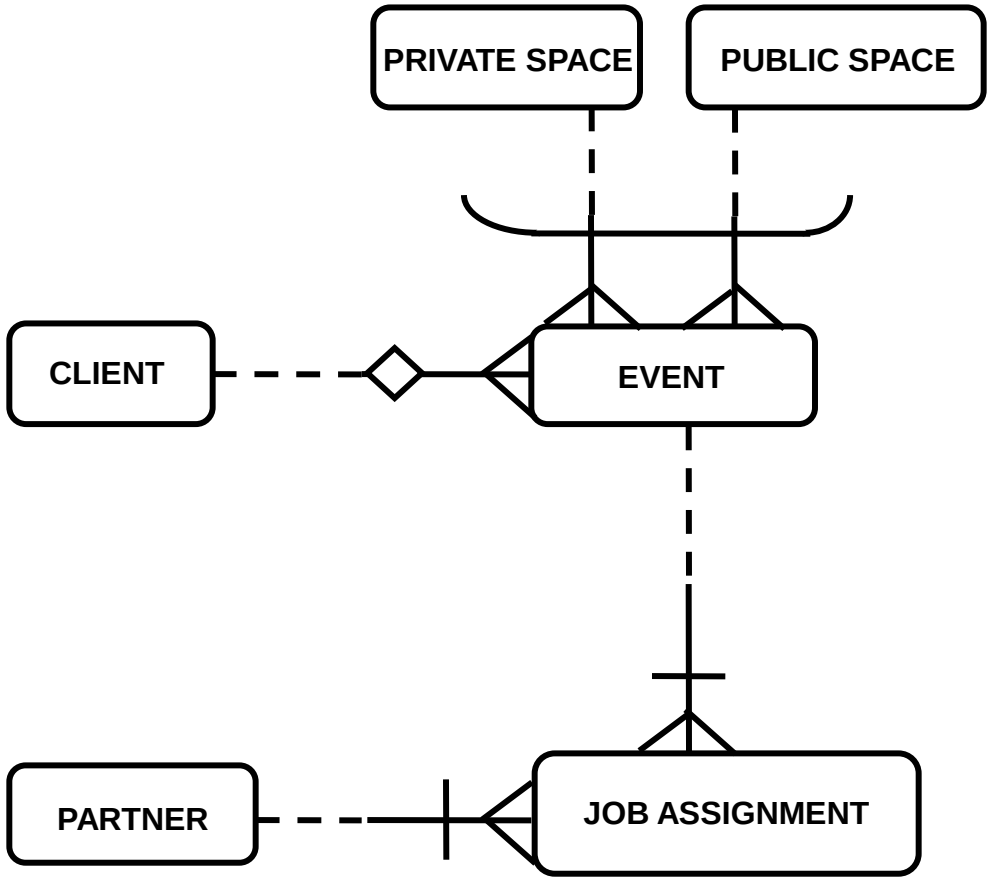
Large ERD Drawing Conventions (cont.)

Following the convention that "crows fly north and west" places the high volume entities on the lower right portion of the ERD.



Large ERD Drawing Conventions (cont.)

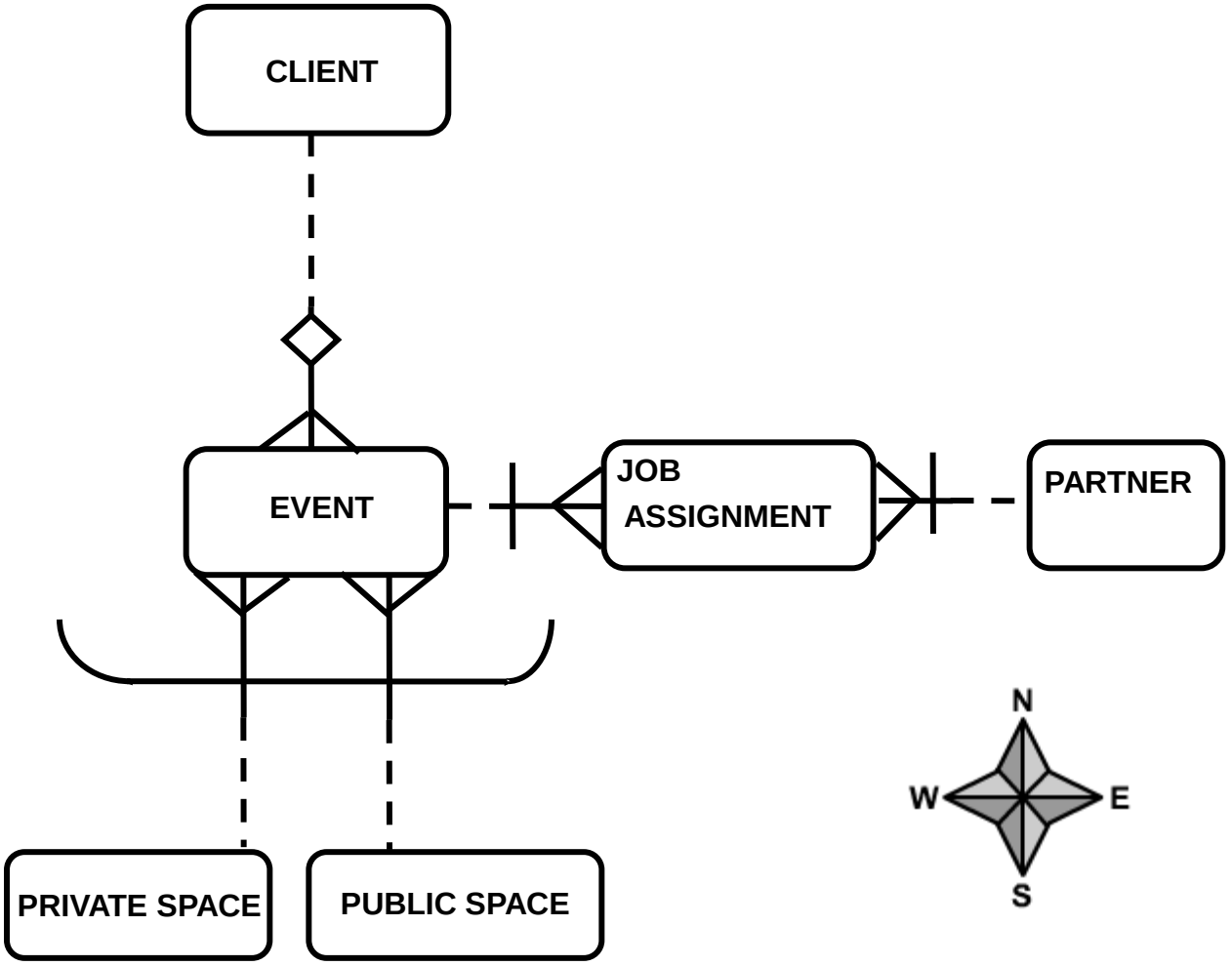
High volume entities are often the “central” or more important entities in an ERD. They will have the highest number of relationships to other entities, and most of the business functions will affect the data stored in these entities.



Clarity is Key

Often you will have a mix, depending on the amount of space you have and your own preference.

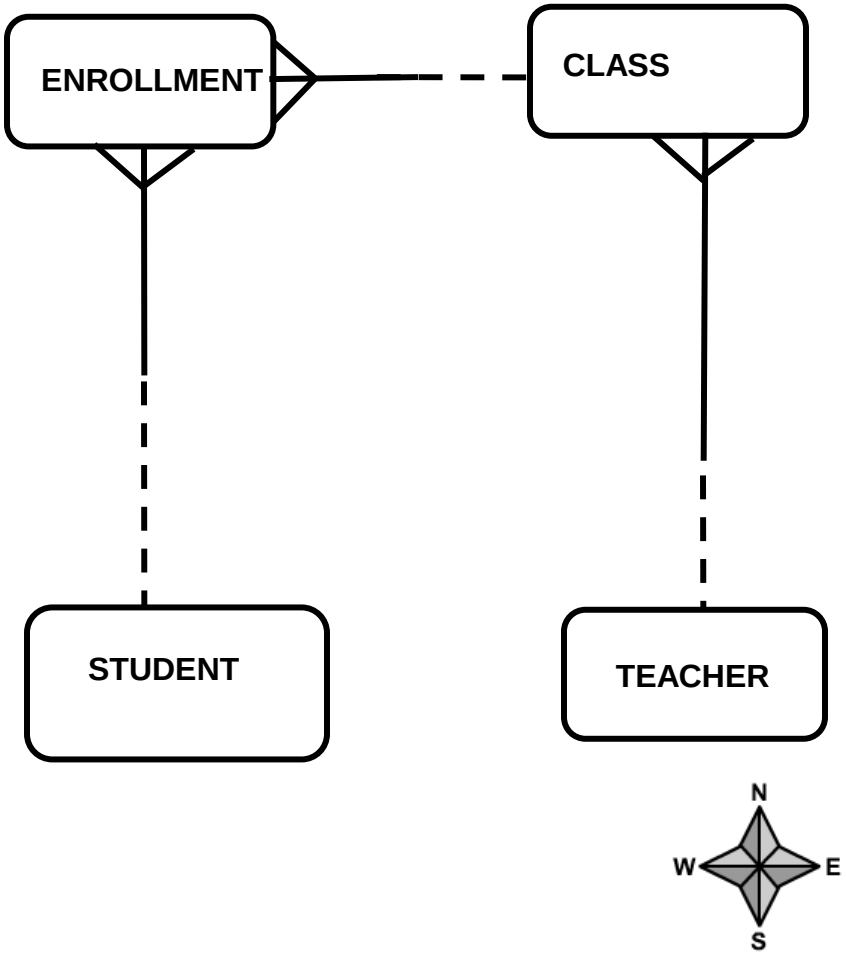
Clarity and readability are the main criteria.



Clarity is Key (cont.)

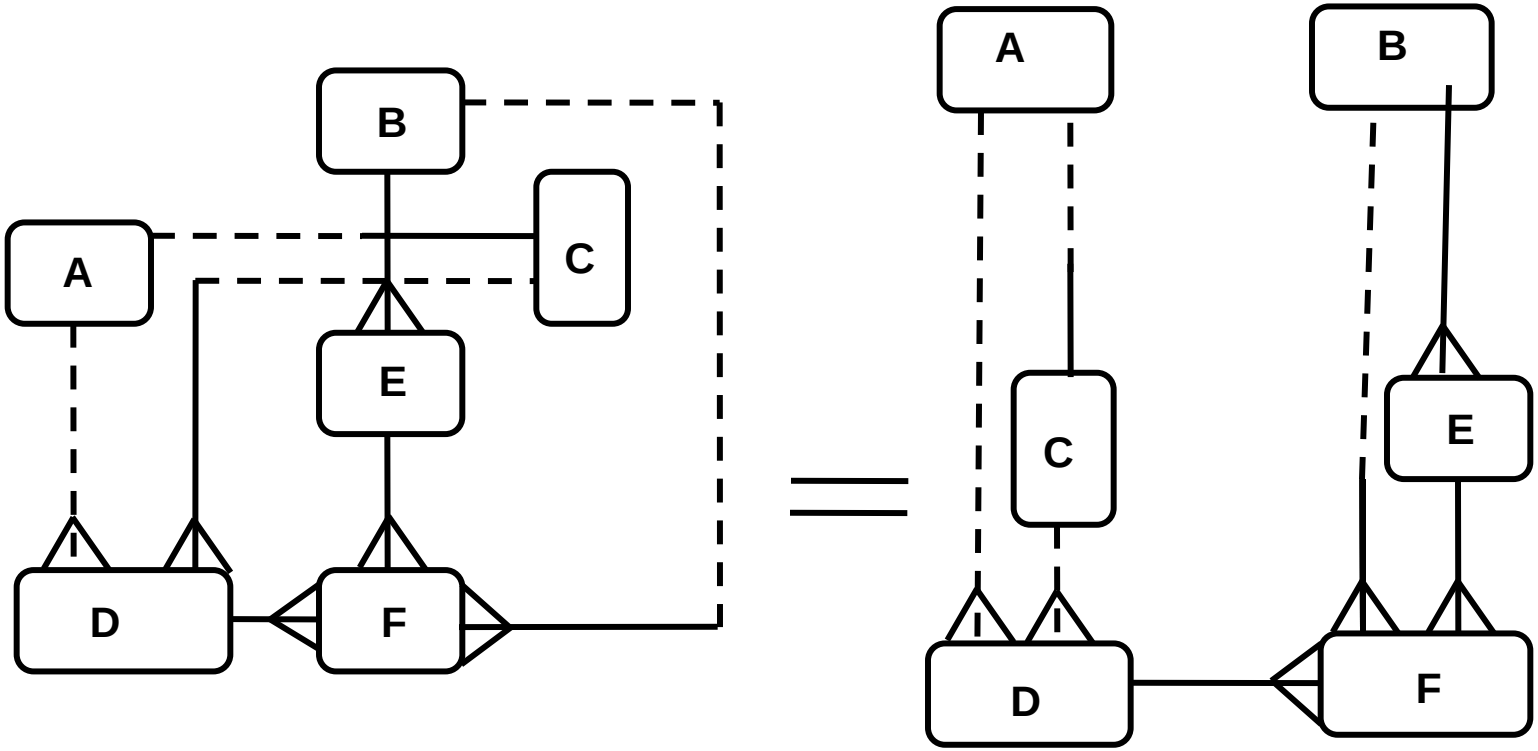
The high volume entities are not always the most important. Which of these entities would have the highest volume?

Which entity is the most important? Again, clarity and readability are the main criteria.



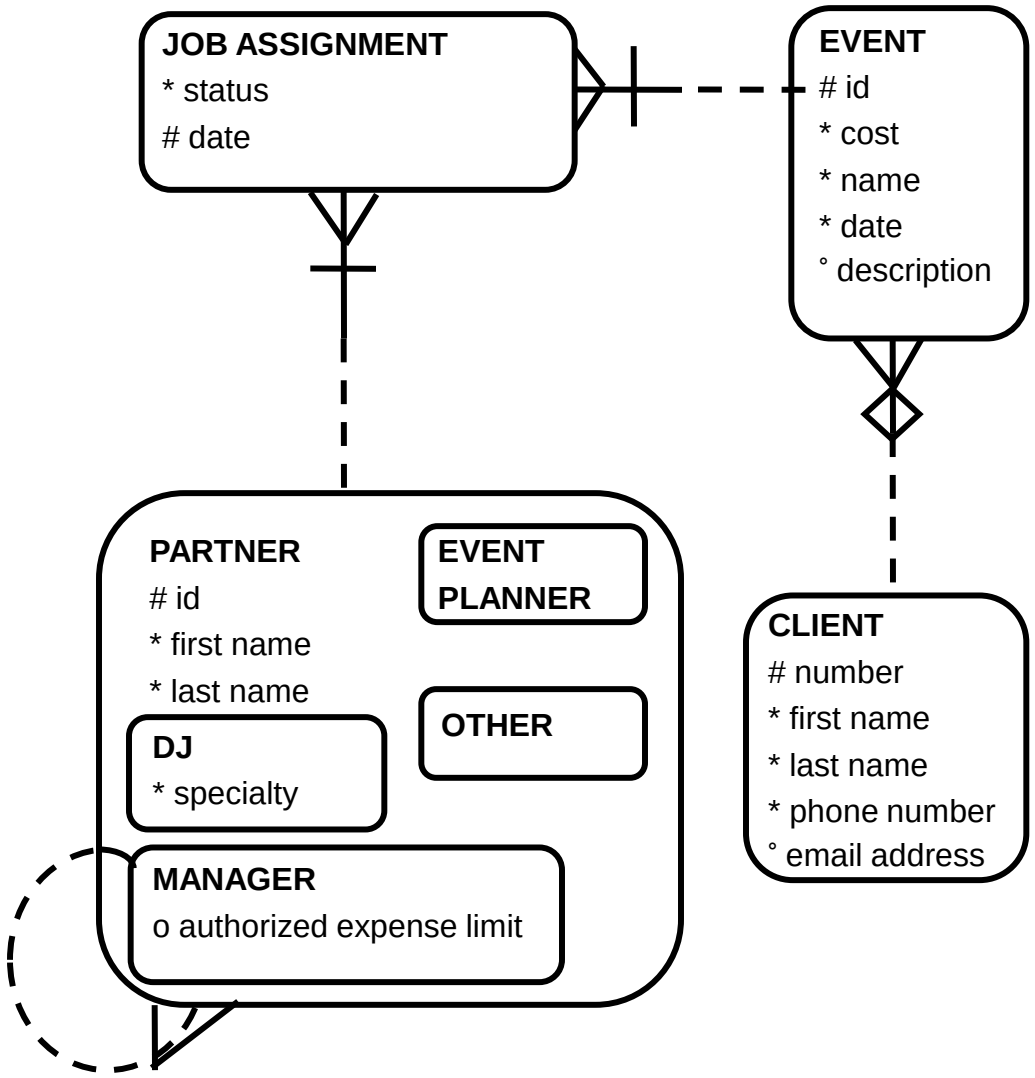
Space is Needed

Readability takes space and is subject to taste. The use of white space helps clarify an ERD.



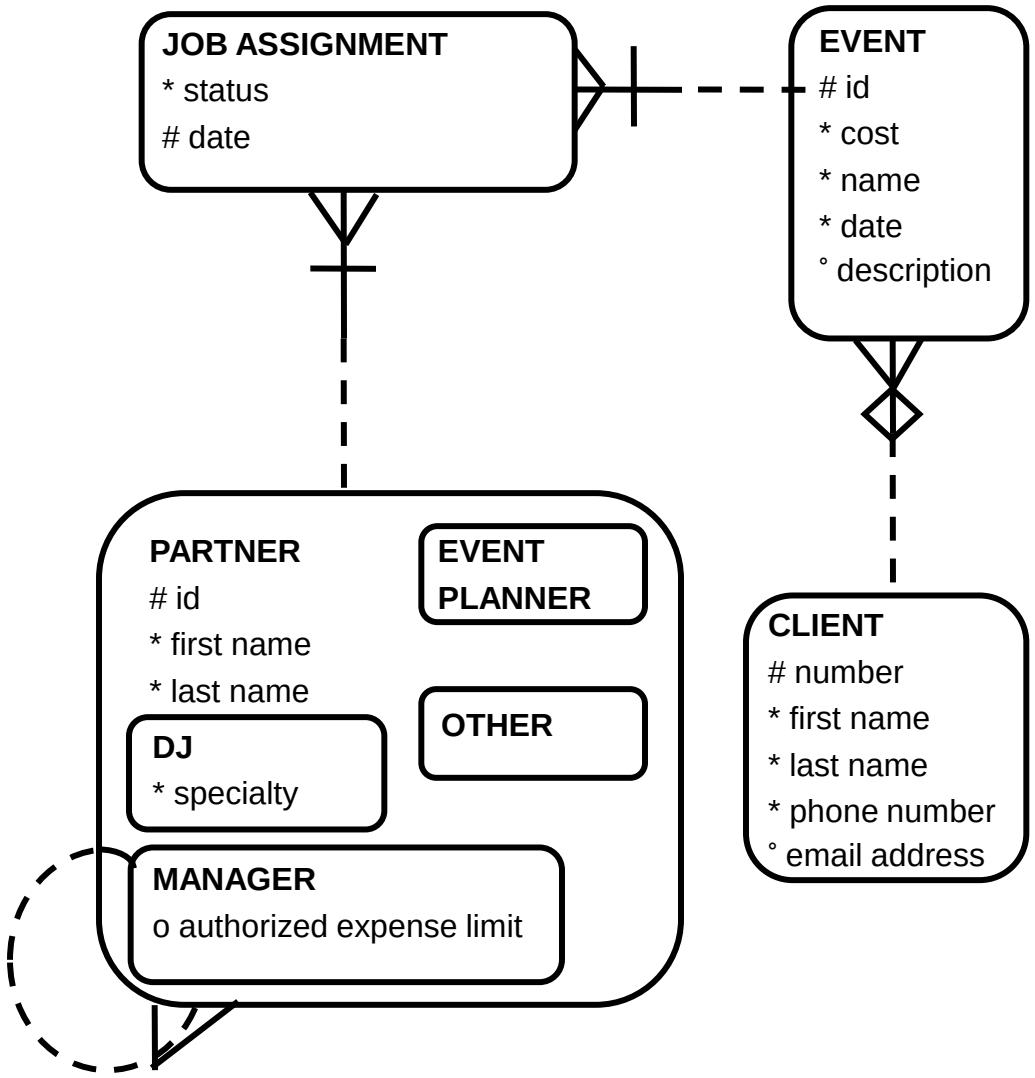
Use Sub-Diagrams

When you have a very large diagram, it may also help to break it up into smaller diagrams of functionally related entities.



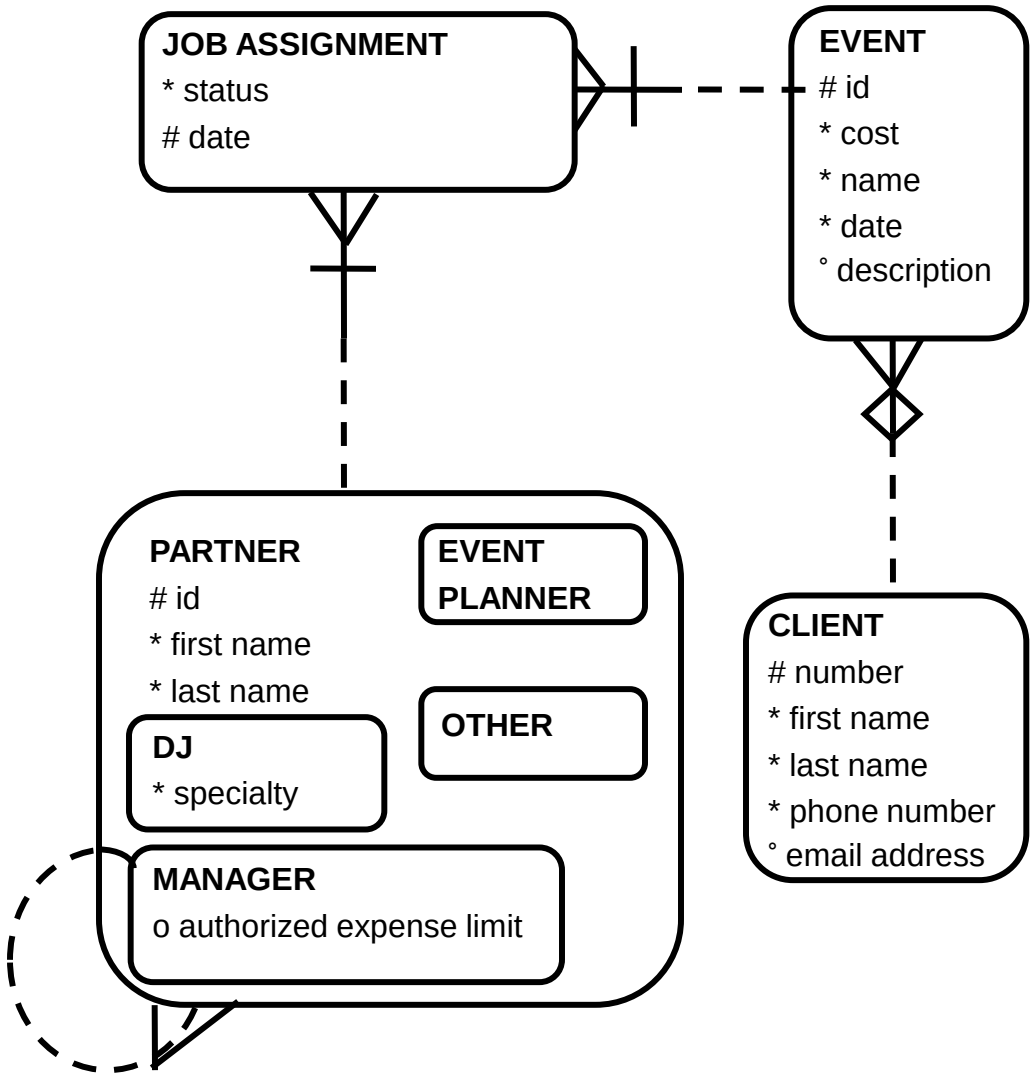
Use Sub-Diagrams (cont.)

You could use the smaller sub-diagrams when presenting to different groups within the customer's company.



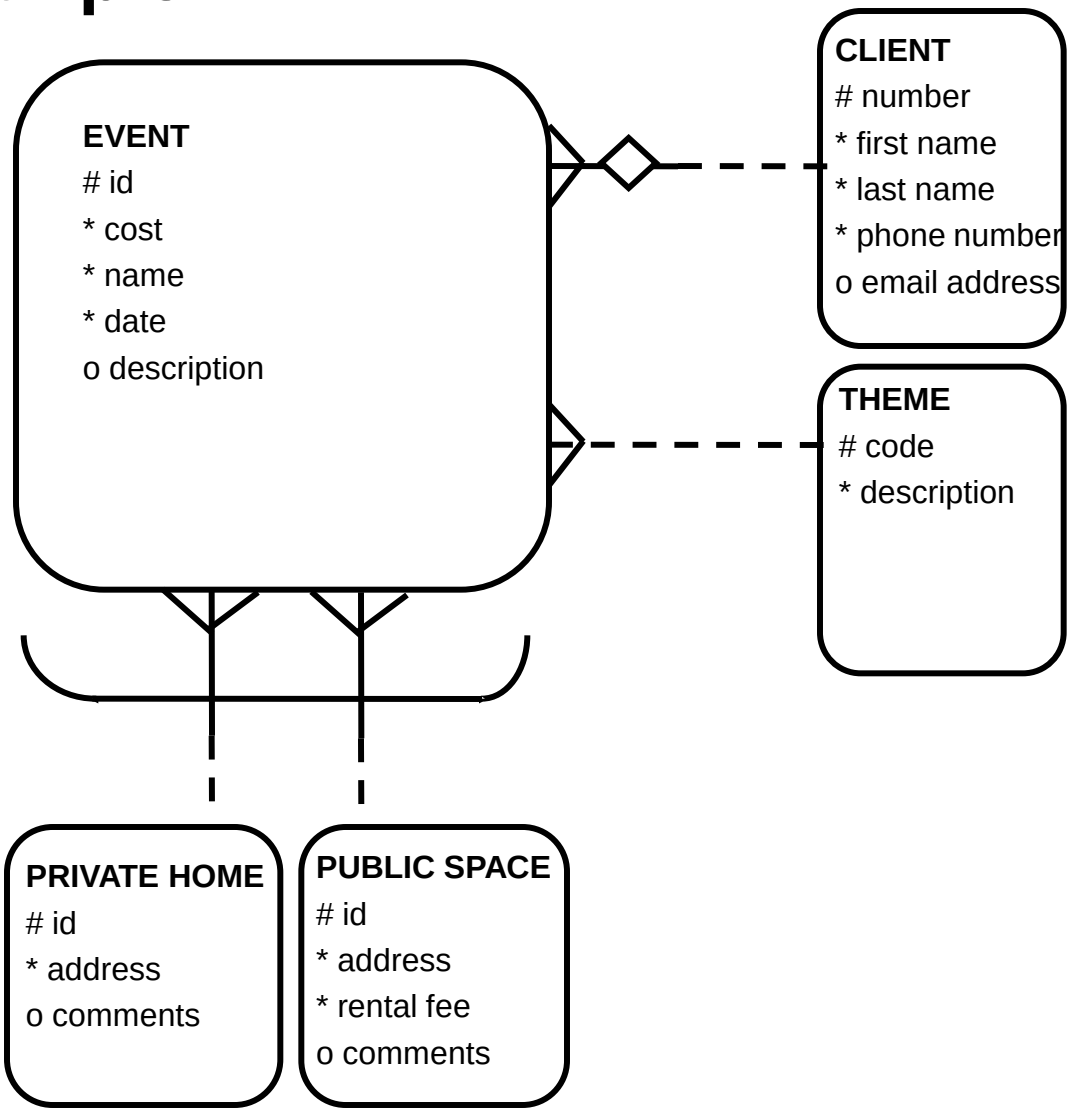
Use Sub-Diagrams (cont.)

These are the entities that the project manager would mainly be interested in.



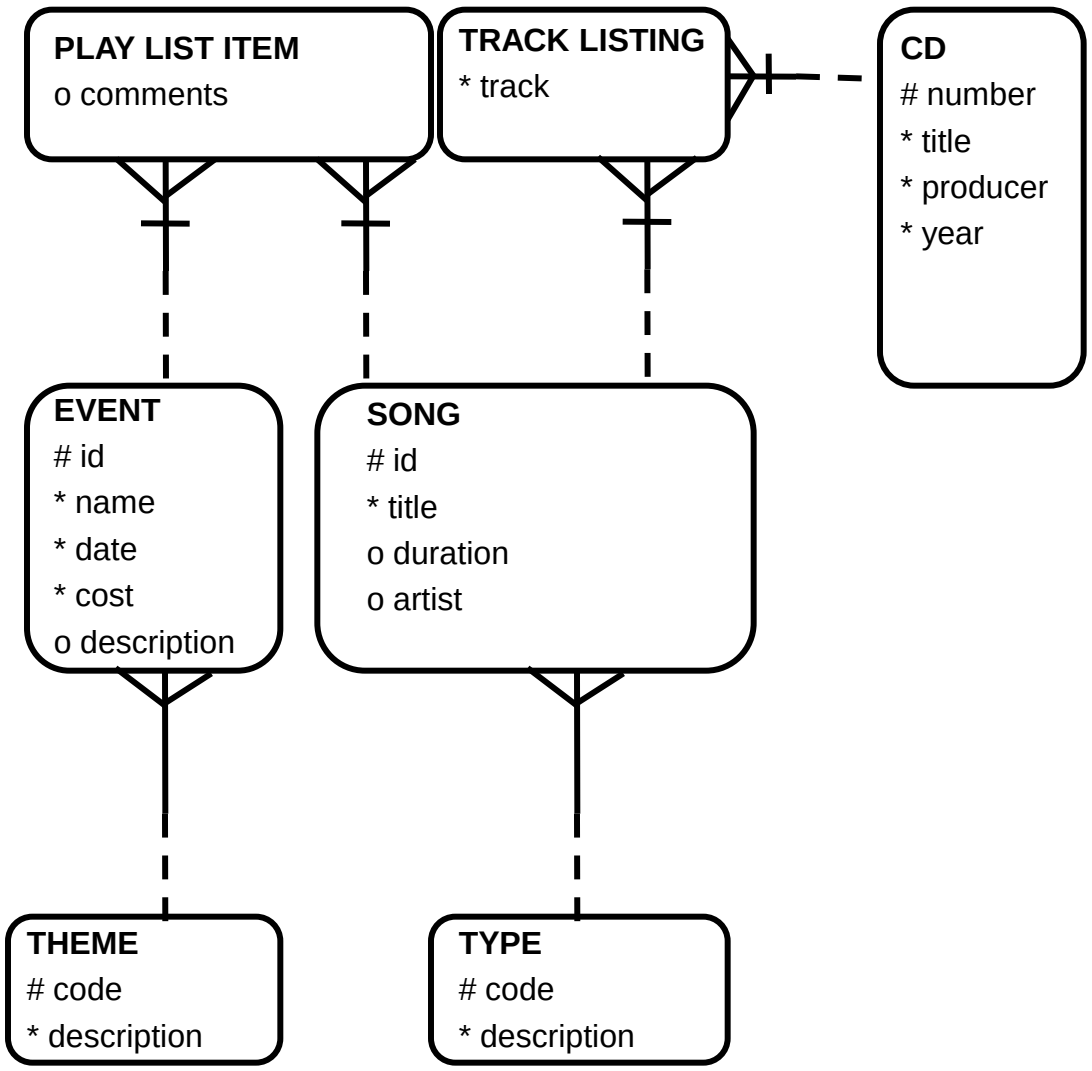
Sub-Diagram Example

These are the entities that the event manager would mainly be concerned with.



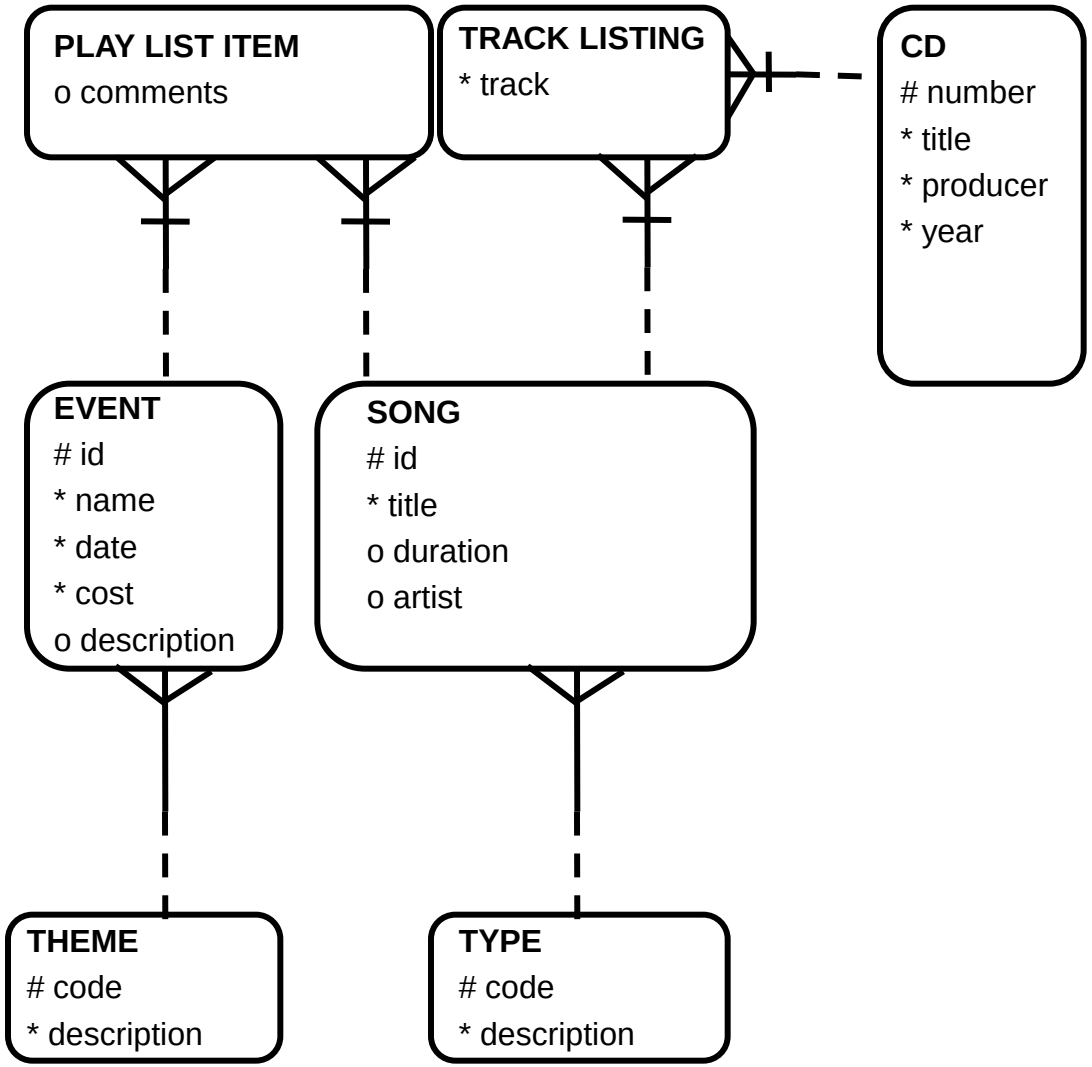
Sub-Diagram Strategy

Often multiple developers build the applications that access a single database.



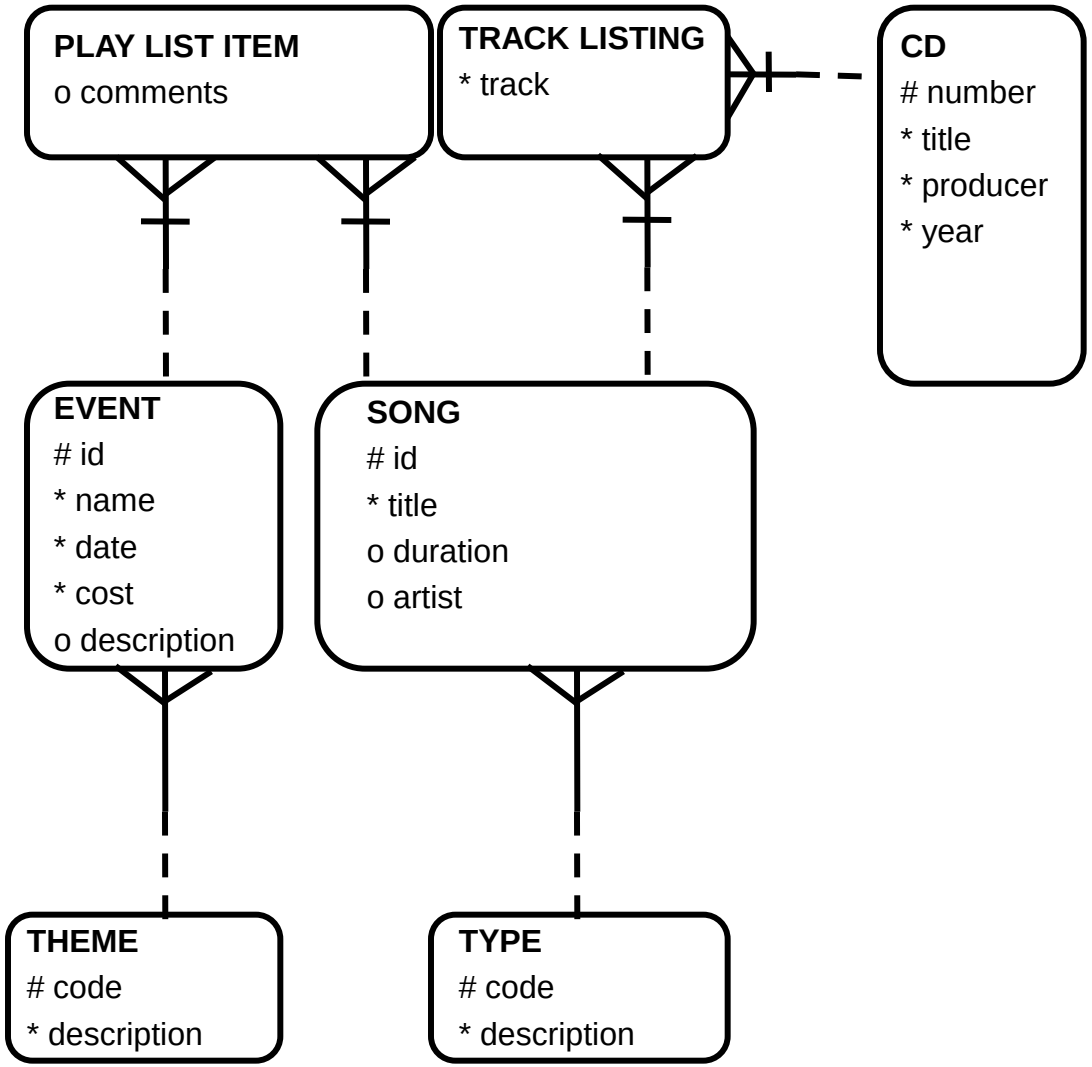
Sub-Diagram Strategy (cont.)

Each application developer could use a smaller diagram that contains the entities that he or she will build screens, forms, and reports for.



Sub-Diagram Strategy (cont.)

These are the entities that the DJ, or someone building an application for the DJ, would mainly be interested in.



Terminology

Key terms used in this lesson included:

- High volume entity
- White space

Summary

In this lesson, you should have learned how to:

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