Database Design

8-4
Drawing Conventions for Readability
Objectives

This lesson covers the following objectives:

• Apply the Oracle drawing conventions to a data model diagram

• Identify high volume entities in a data model diagram and explain their significance to the business

• Redraw a given data model 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.
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.

• There are two drawing conventions that are widely in use:
  – one that places high volume entities towards the top left of the page, and one that places high volume entities towards the bottom right of the page.

• It is not important which convention you follow, but chose one and try to use it consistently.

• A High-volume entity is an entity that will have a large number of instances.
Large ERD Drawing Conventions

- 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.
Large ERD Drawing Conventions

- When high volume entities are on the upper left portion of the ERD, the crows feet will tend to point south and east.
Large ERD Drawing Conventions

- When high volume entities are on the lower right portion of the ERD, the crows feet will tend to point north and west.
Clarity is Key

• Use conventions sensibly.
• The major goal of creating the diagram is to give a representation of the model that can be used for communication purposes.
• This means that you must never let a convention interfere with readability and clarity.
• Often you will have a mix of conventions, depending on the amount of space you have and your own preference.
• Clarity and readability are the main criteria.
Clarity is Key

- For clarity and readability in an ERD:
- Avoid crossing relationship lines
- Avoid entities that overlap
- Avoid relationship lines that cross entities
- Use plenty of “white space”
- Split larger ERDs into smaller sub-diagrams if required
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

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

• It is still important to have a big diagram that shows the whole picture (even if it has to be printed on a plotter or taped together from smaller pieces of paper).

• There may be relationships between entities in different sub-models, and these must be represented somewhere.
Terminology

Key terms used in this lesson included:

• High volume entity
• White space
Summary

In this lesson, you should have learned how to:

• Apply the Oracle drawing conventions to a data model diagram

• Identify high volume entities in a data model diagram and explain their significance to the business

• Redraw a given data model diagram to increase clarity and readability

• Recognize the usefulness of dividing a complex ERD into a number of functional sub-diagrams