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Database Design

8-4

Drawing Conventions for Readability

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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

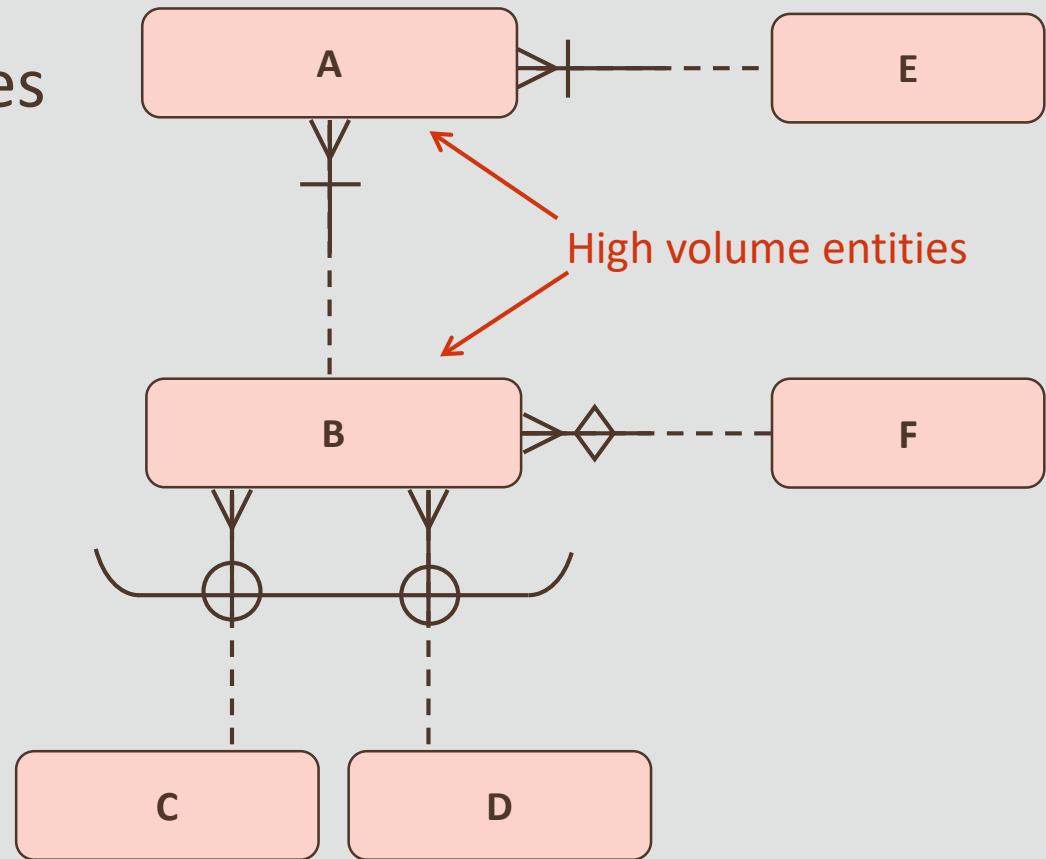
- What if all shoemakers made up their own sizes?
- What if every architect used a different system to draw plans for a building?
- Following the same conventions makes it easier to work as part of a team

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

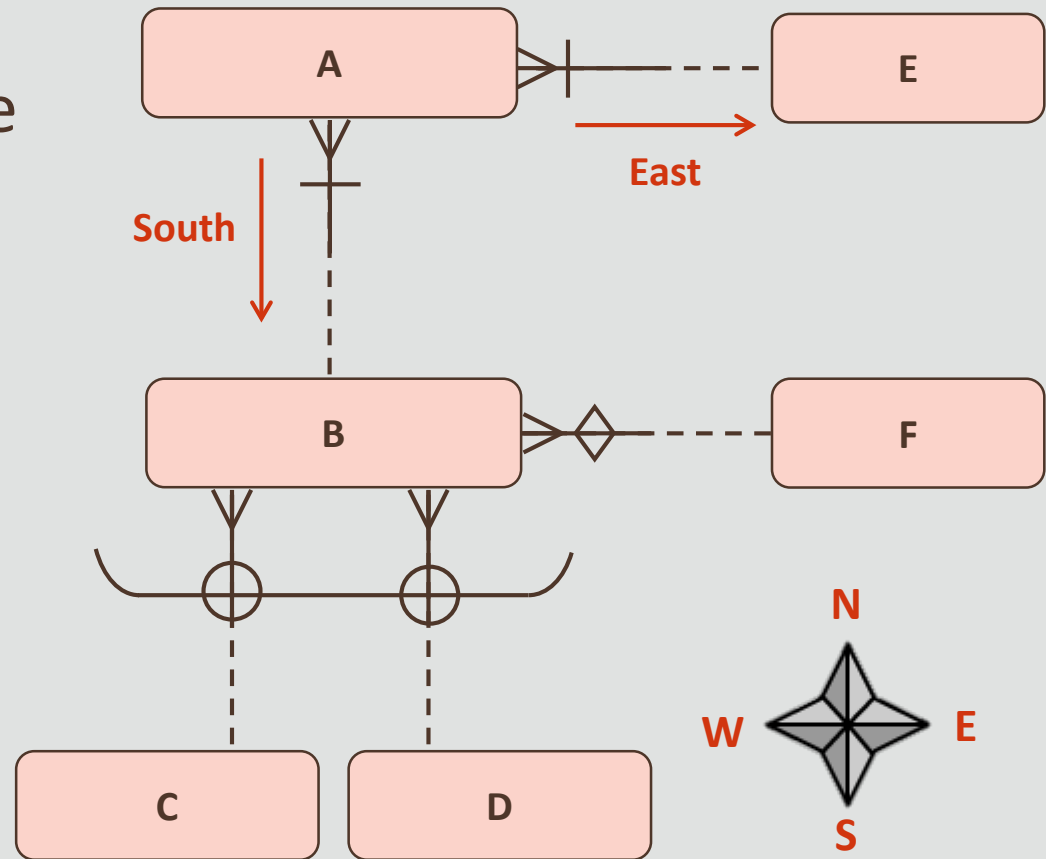
Large ERD Drawing Conventions

- 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



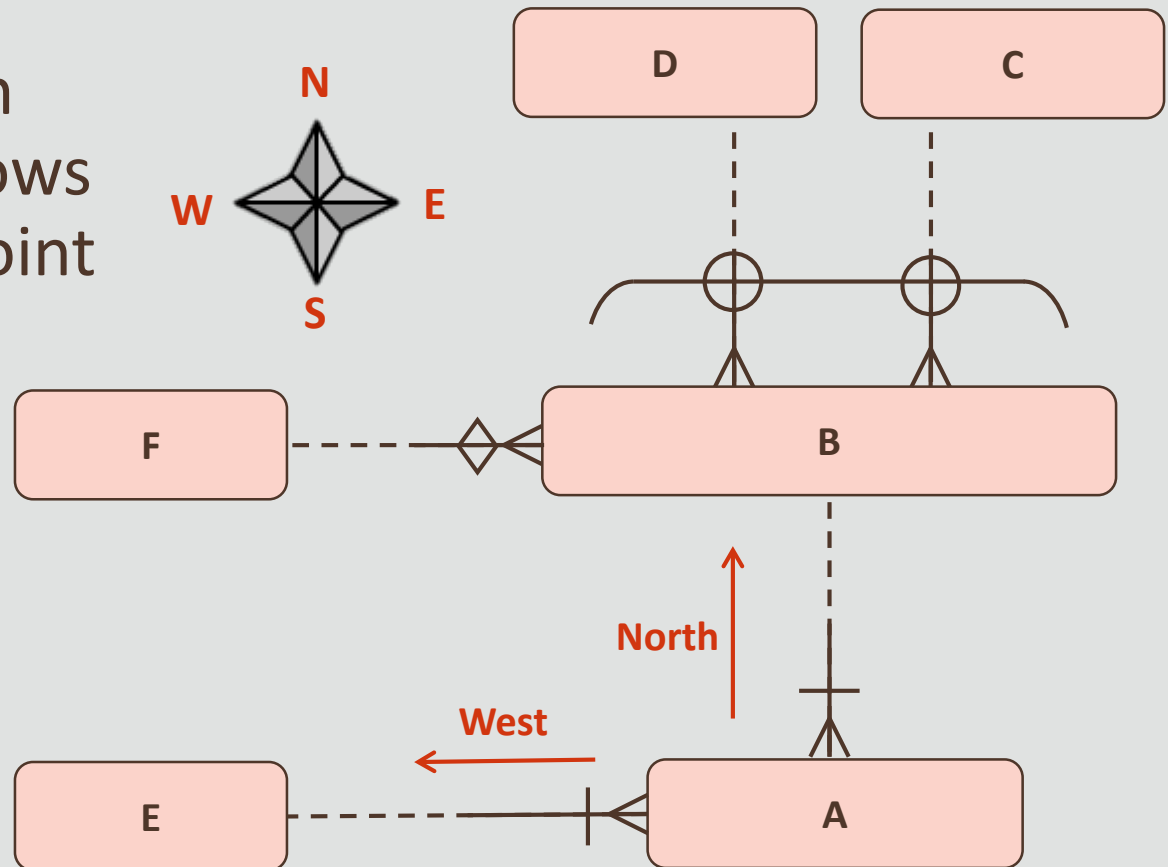
Large ERD Drawing Conventions

- 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 crow's feet will tend to point north and west



Clarity is Key

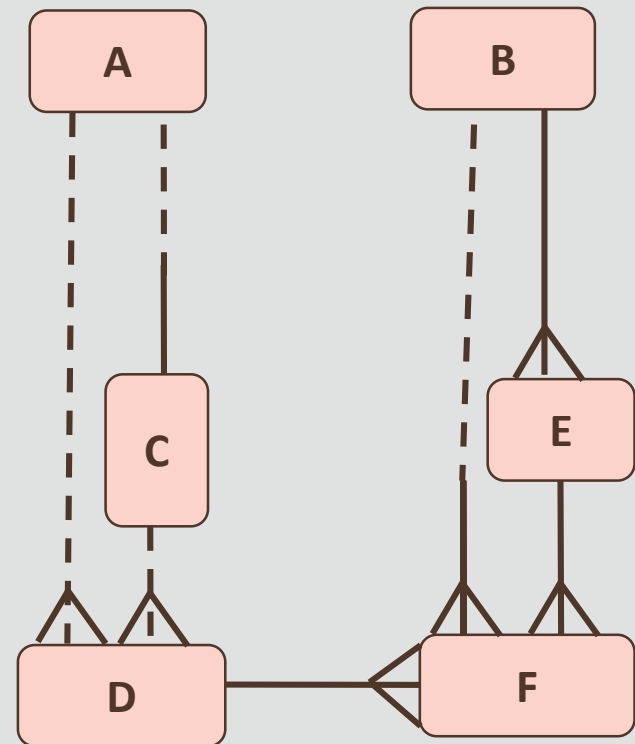
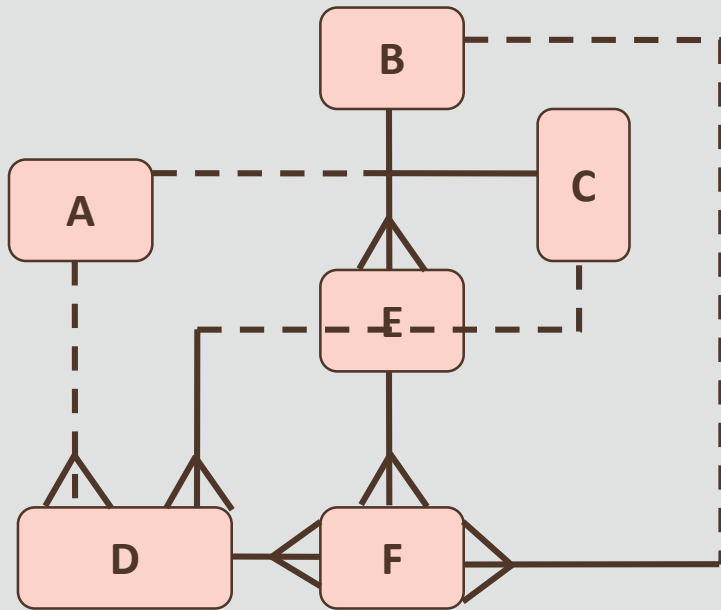
- Use conventions sensibly
- The major goal of creating the diagram is to give a representation of the model that can be used for communication purposes
- This means that you must never let a convention interfere with readability and clarity
- Often you will have a mix of conventions, depending on the 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

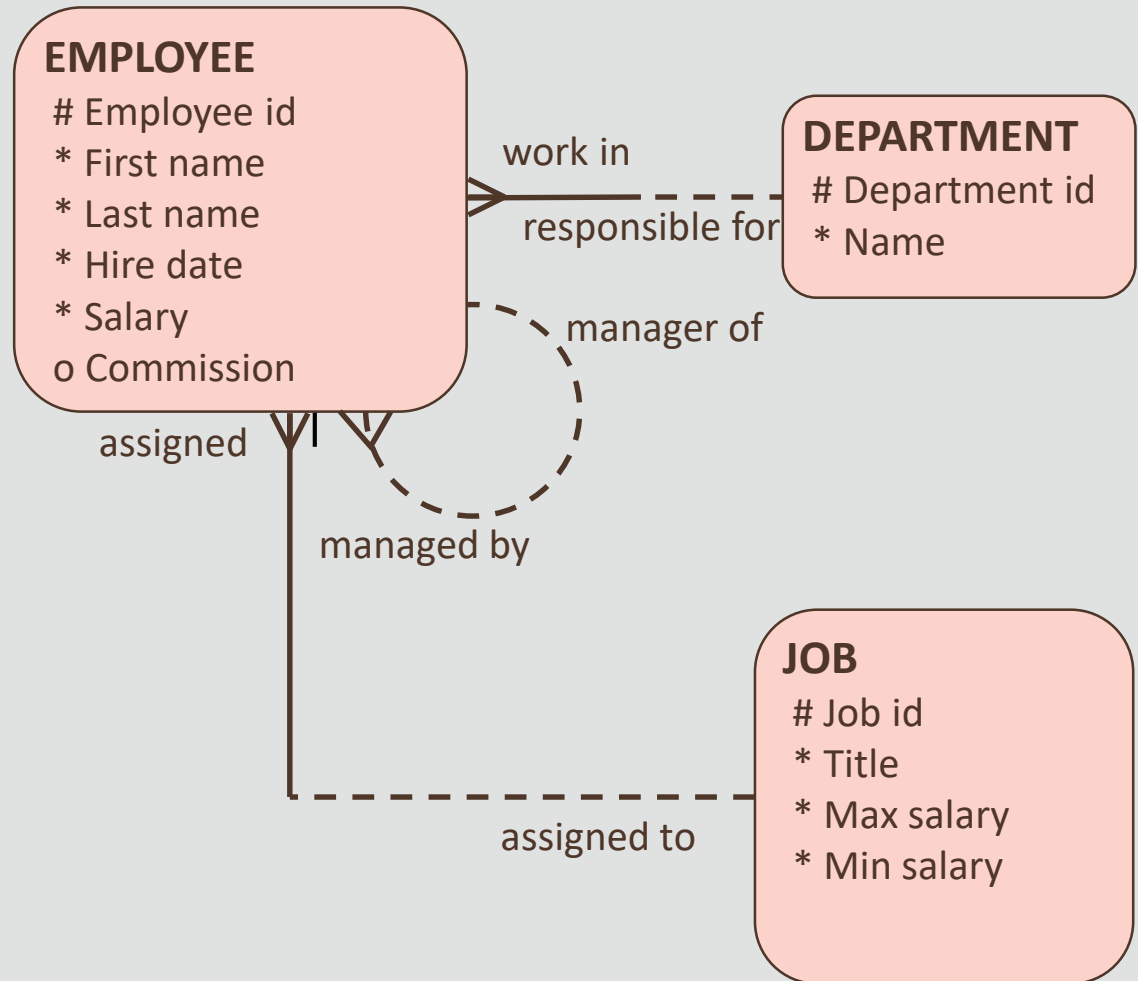
Space is Needed

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



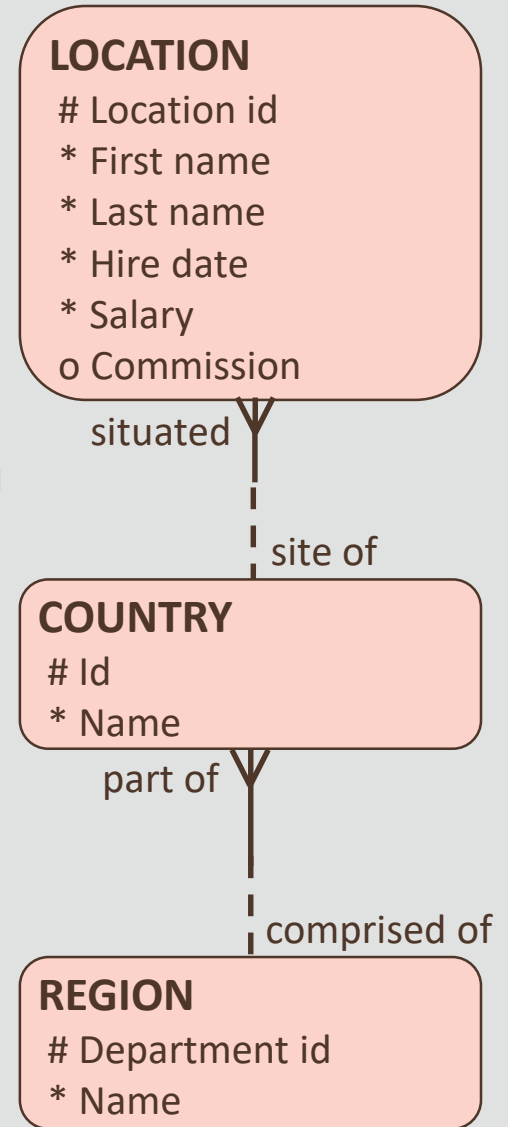
Use Sub-Diagrams

- 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



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