Conceptual and Physical Models
What Will I Learn?

In this lesson, you will learn to:

• Describe the importance of describing information requirements
• Distinguish between a conceptual model and the physical implementation
• List five reasons for building a conceptual data model
• List examples of conceptual models and physical models
Why Learn It?

When you are able to recognize and analyze information, you can better understand how things work and potentially make them better. For example:

- How to make the line at the food counter go faster
- How to make a successful exchange at the store
- How to organize and keep track of your growing CD collection

Also, recognizing and analyzing information helps prevent mistakes and misunderstanding. For a business, this is important because it saves time and money.
Tell Me / Show Me

View the following animation and participate in the discussion afterward.

Was this an easy way to get an order of sandwiches?

What would you have done differently if you were the chef?

What would you have done differently if you were the one placing the order?
Tell Me / Show Me

What the person had in mind was the “conceptual model,” and what the chef created was the “physical model” of the sandwich tray.

It would have helped if the conceptual model was understood by both from the beginning.

Can you think of other examples where accurately describing what you want (conceptual) is important in getting what you want (physical)?
Tell Me / Show Me

Businesses use data to grow or to reduce their costs. In the process of creating a data model a business will create a conceptual model of their data. The purposes of a conceptual model are to:

- Describe exactly the information needs of the business
- Facilitate discussion
- Prevent mistakes, misunderstandings
- Form important “ideal system” documentation
- Form a sound basis for physical database design
- Document the processes of the business (this is also known as the “business rules”)
- Take into account regulations and laws governing this industry
Tell Me / Show Me

It’s the art of planning, developing, and communicating that produces a desired outcome.

Data modeling involves getting the requirements down and using a diagram to describe them. This diagram becomes the blueprint for designing the actual thing.

The client’s dream (conceptual model) will become a physical building (physical model).
Tell Me / Show Me

Terminology
Key terms used in this lesson include:

- Conceptual model
- Data
- Data model
- Physical model
Summary

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- Describe the importance of describing information requirements
- Distinguish between a conceptual model and the physical implementation
- List five reasons for building a conceptual data model
- List examples of conceptual models and physical models
Summary

Practice Guide

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