Database Design
2-1: Conceptual and Physical Models
Practice Activities

Objectives

- Explain the importance of clearly communicating and accurately capturing information requirements
- Distinguish between a conceptual model and its physical implementation
- List five reasons for building a conceptual data model
- Give examples of conceptual models and physical models

Vocabulary

Identify the vocabulary word for each definition below.

	A design for an object (a car, a house, a database, etc.) which includes implementation details such as size, volume, weight, etc.
	A data model, usually represented by an entity-relationship diagram.
	A collection of facts from which conclusions may be drawn.
	The process of capturing the important concepts and rules that shape a business and depicting them visually on a conceptual model

Try It / Solve It

1. You will be working in pairs for this activity.

   - One student describes his/her “dream house” while the other student attempts to draw it.

     You can discuss specific details, but the student describing the house is not allowed to see what is being drawn until after time is called.

   - After sharing your drawing, describe the importance of accurately describing information requirements.

2. Review the scenario below. Identify the conceptual model and the physical model from the scenario.

   Zoe was about to go into a store to purchase drinks for the birthday party scheduled for that evening. Zoe knows that she needs drinks for 48 people and is expecting the store to accept a check for payment and to provide her with some assistance carrying the product to her car. Zoe wants to have carbonated drinks, non-carbonated drinks, and sugar free drinks. She is expecting to purchase eight six-packs. Zoe enters the store and discovers the entire drink distribution system is automated. She also discovers that the drinks come in varying package sizes and that she must choose the correct vending option for the products to be disbursed. Drinks are packaged in four-packs, six-packs, and ten-packs.

3. Provide five reasons for creating a conceptual data model.

4. List two examples of conceptual models and physical models.