

# Chapter 6

## Developing Data Models for Business Databases

# Steps of Narrative Problem Analysis

1. Identify entity types and attributes
2. Determine primary keys
3. Add relationships
  - Determine connections
  - Determine relationship cardinalities
  - Simplify relationships

# Determine Entity Types and Attributes

- For entity types, find nouns that represent groups of people, places, things, and events
- For attributes, look for properties that provide details about the entity types
- Simplicity principal: consider a key noun as an attribute unless other details provided

# Identify Relationships

- Identify relationships connecting previously identified entity types
  - Relationship references involve associations among nouns representing entity types
  - Sentences that involve an entity type having another entity type as a property
  - Sentences that involve an entity type having a collection of another entity type

# Determine Primary Keys

- Four requirements for a good primary key:
  - Unique
  - Stable (never changes)
  - Small
  - Single purpose
    - used only for entity identification
- Good choice:
  - Sequentially generated integers which never appear to end user