



Business School  
UNIVERSITY OF COLORADO DENVER

Information Systems Program

# Module 8

## Developing Business Data Models

### Lesson 2: Analyzing Narrative Problems

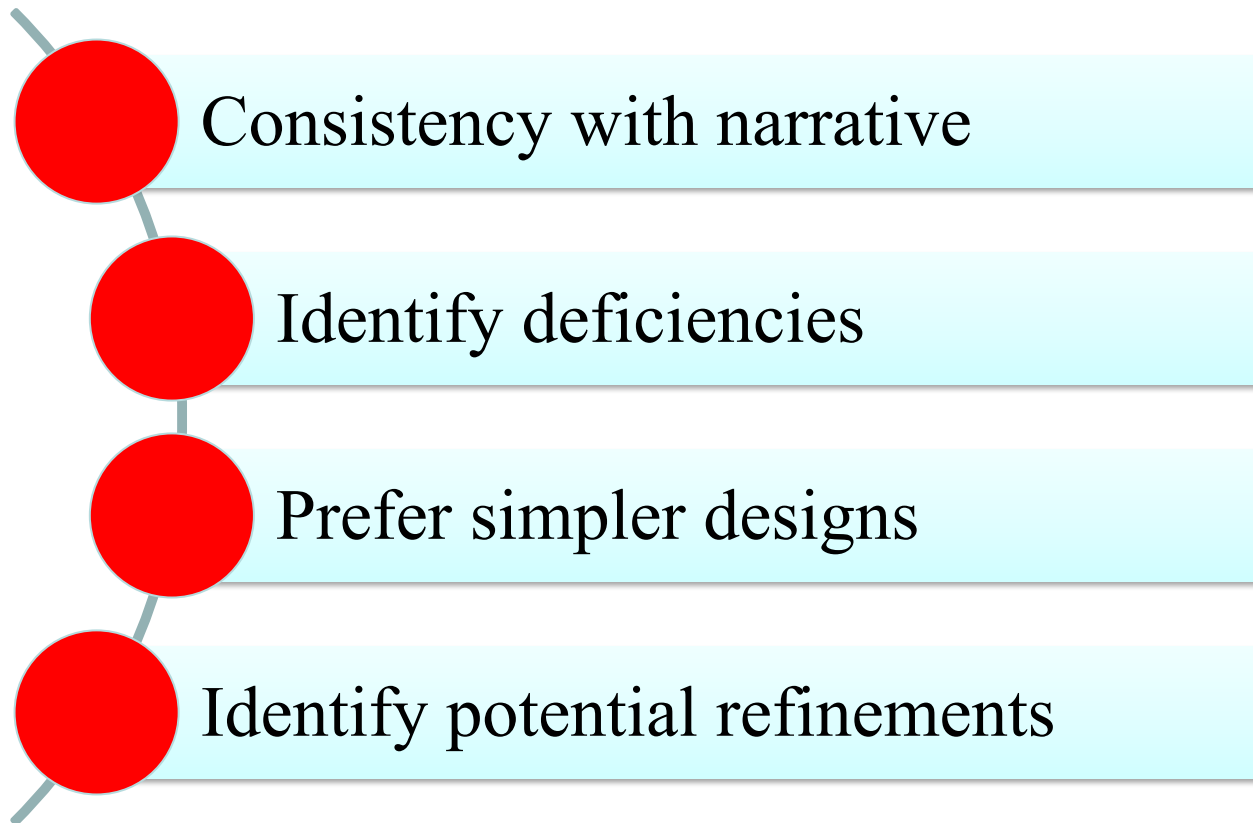


# Lesson Objectives

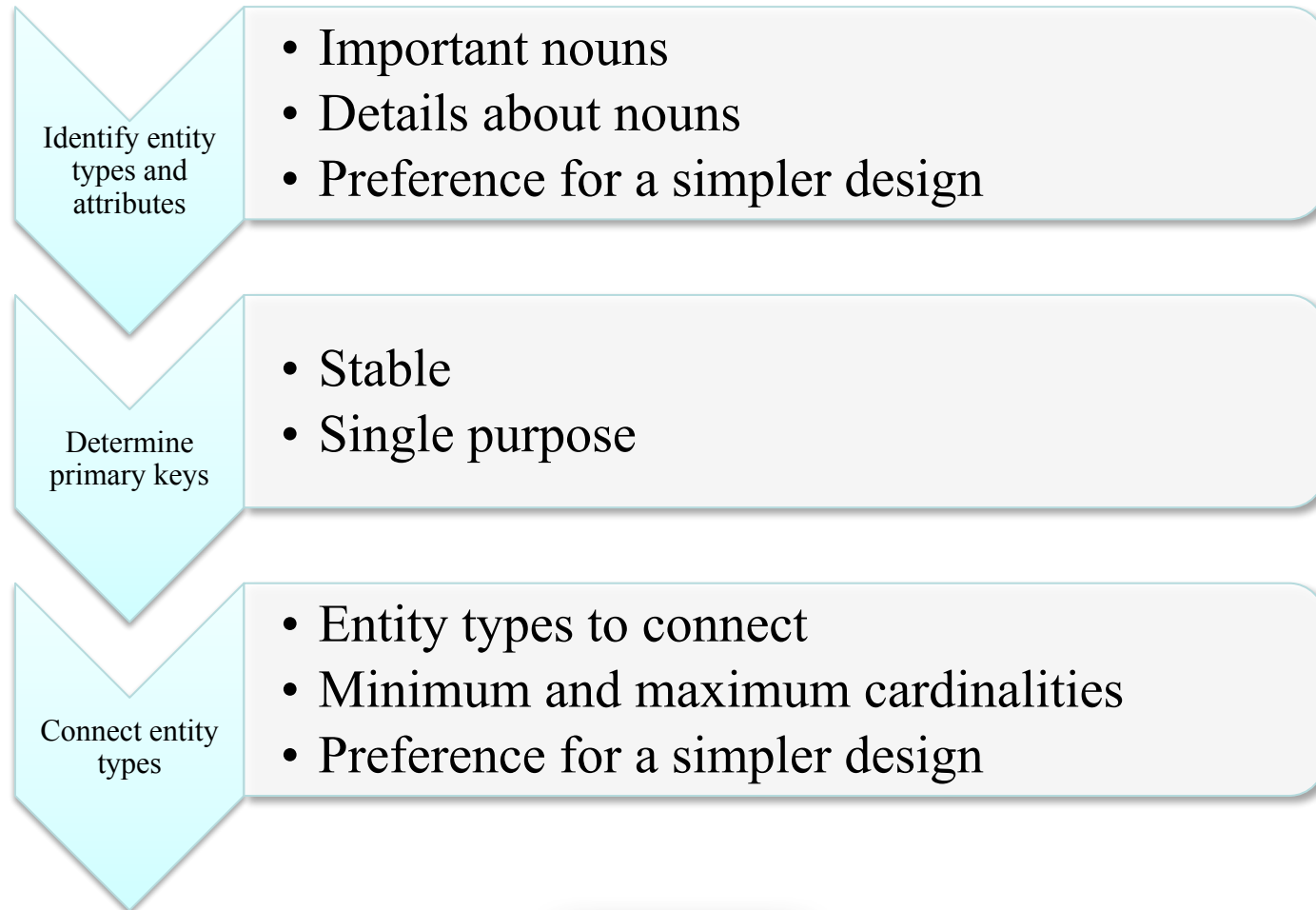
- Explain goals and steps of narrative problem analysis
- Apply steps on a practice problem
- Reflect on limitations of narrative problem analysis



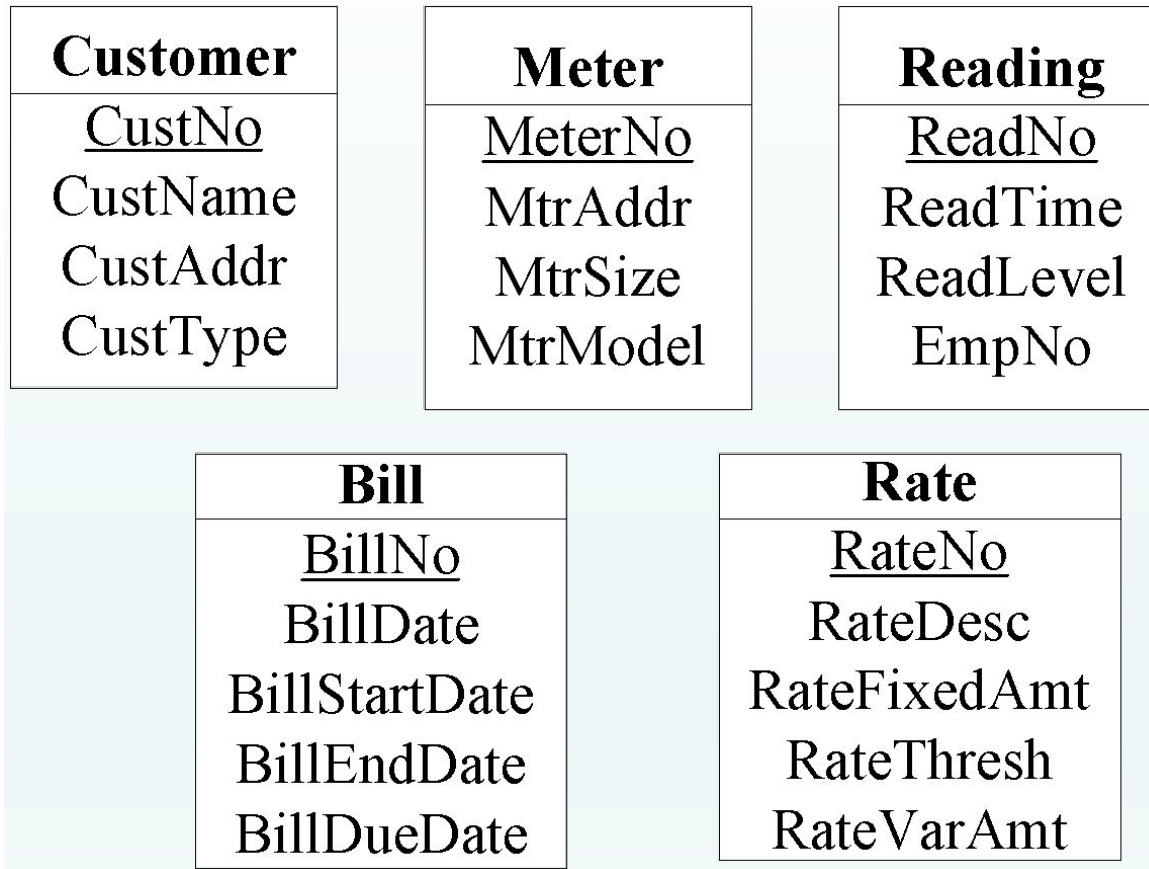
# Goals of Narrative Problem Analysis



# Steps of Narrative Problem Analysis



# Problem Narrative Example (I)



# Government Identifiers

- Widely used for tax returns and government benefits
- Avoid for primary keys
  - Privacy concerns
  - Prohibited by organization policies
  - Sometimes violate single-purpose tenet
- May need to store as an attribute for government compliance

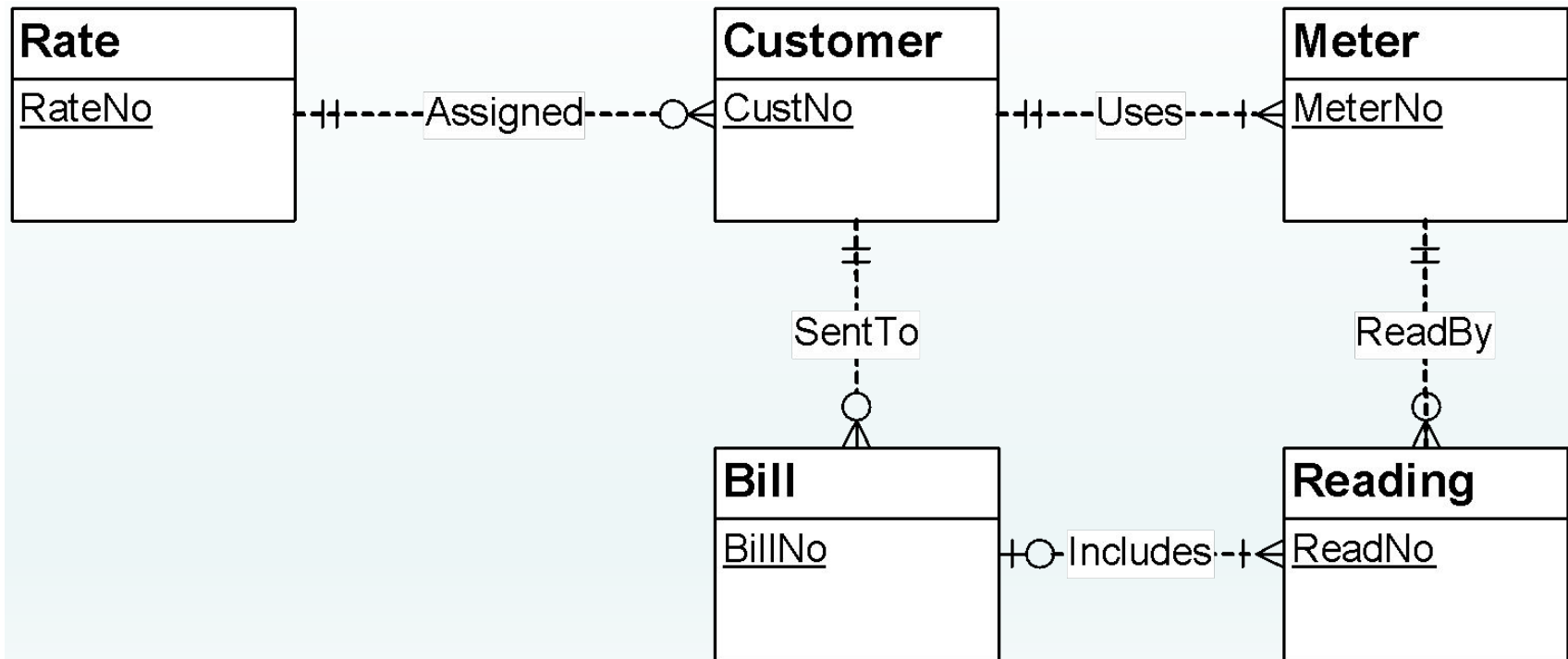


# Adding Relationships

- Examine sentences linking 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



# Problem Narrative Example (II)





# Relationship Simplification

- Problem statement requires direct or indirect connections
- Hub entity types to simplify
  - Connect other entity types
  - Sometimes associated with important documents
  - Reduce number of direct connections



# Summary of Data Modeling Strategies

- Strive for consistency with the narrative
- Preference for simpler designs at least initially
- Use specialized relationships carefully
- Use notation precisely

