



Business School  
UNIVERSITY OF COLORADO DENVER

Information Systems Program

# Module 8

## Developing Business Data Models

### Lesson 4: Design Transformations II

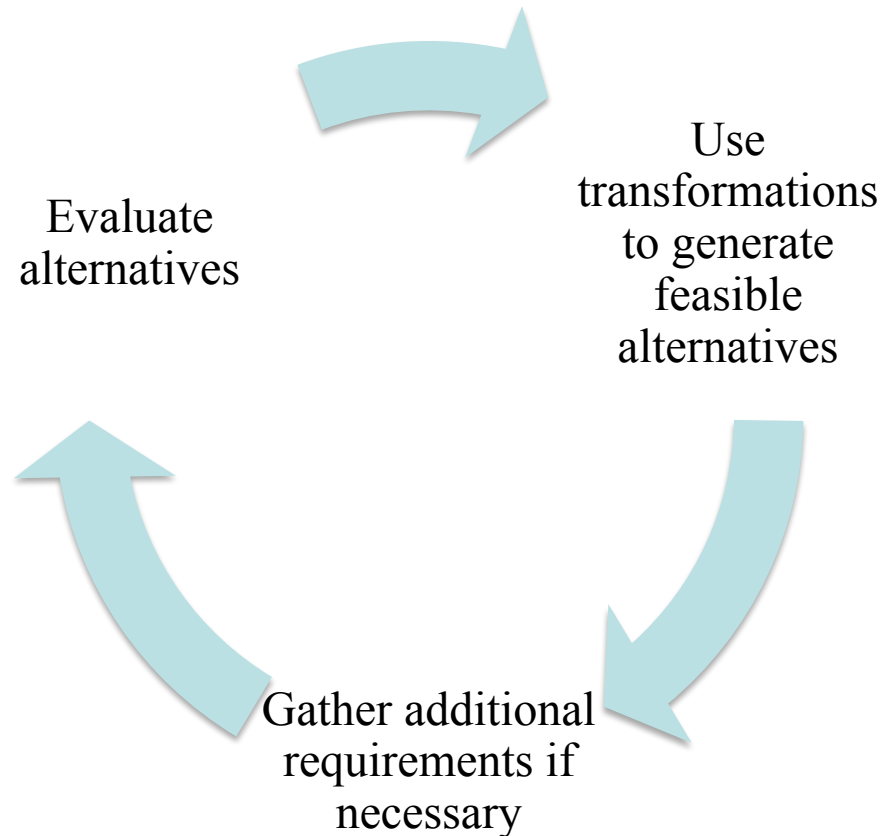


# Lesson Objectives

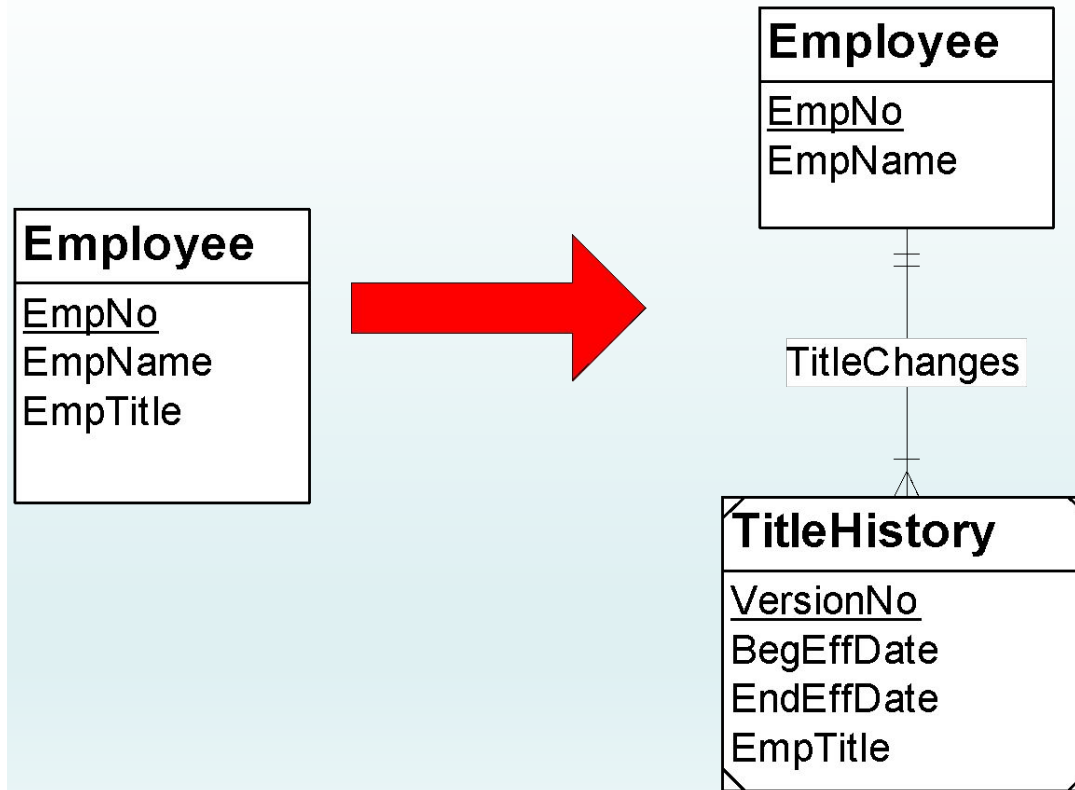
- Understand the importance of generating and evaluating alternative designs
- Explain a situation for using each transformation
- Apply each transformation



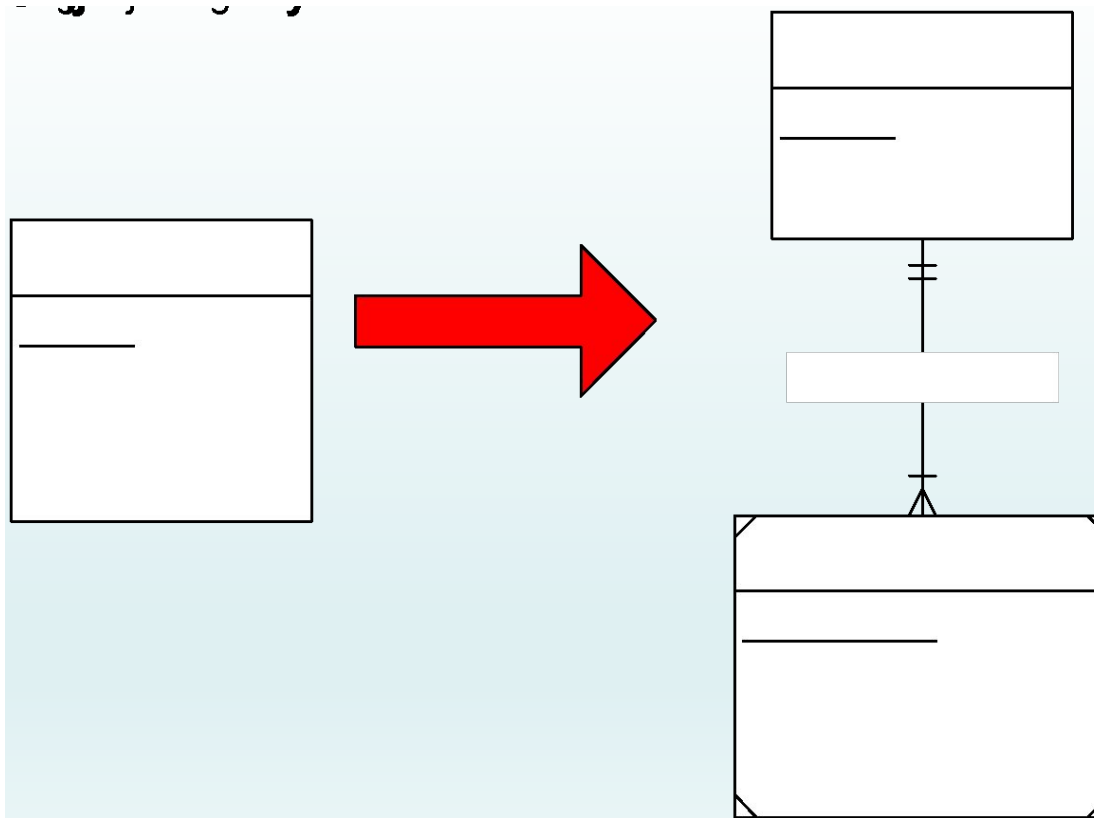
# Diagram Refinements



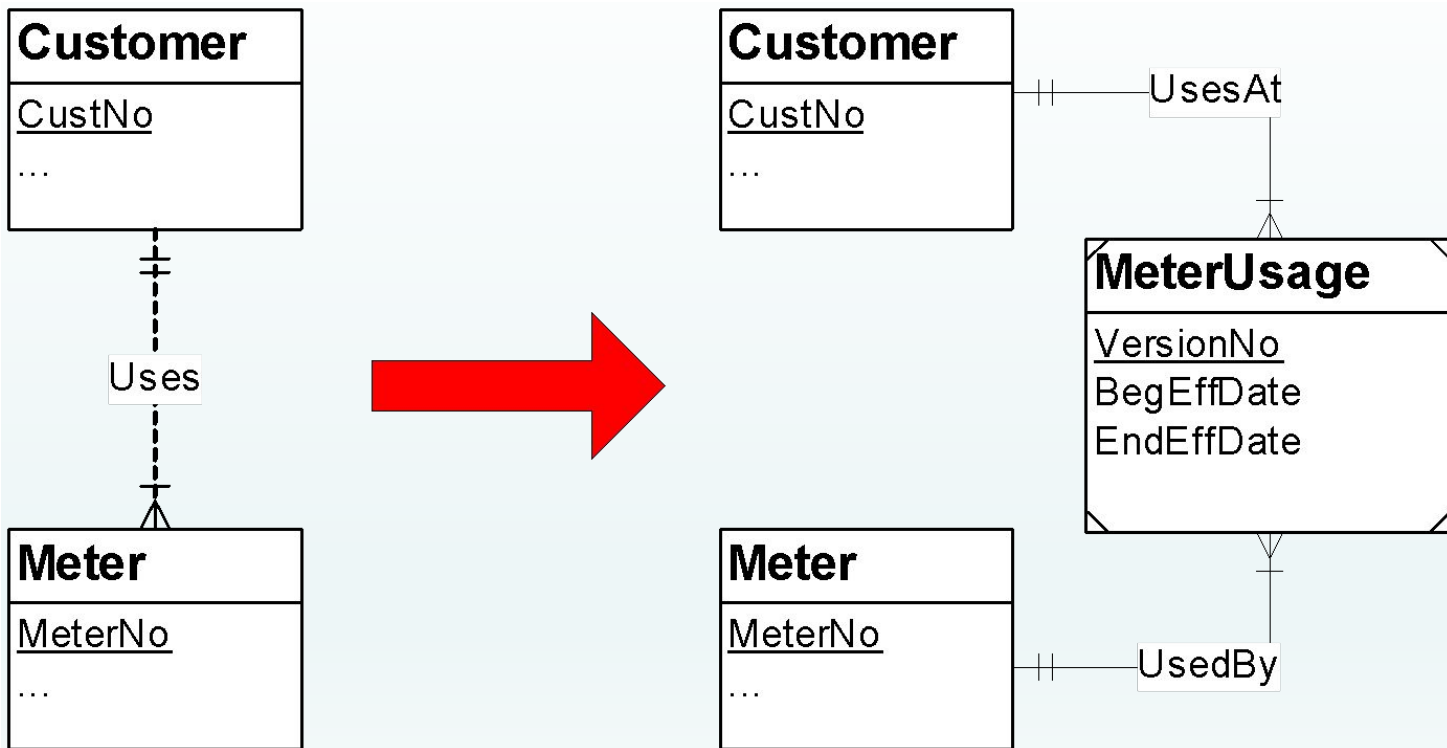
# Attribute History Transformation I



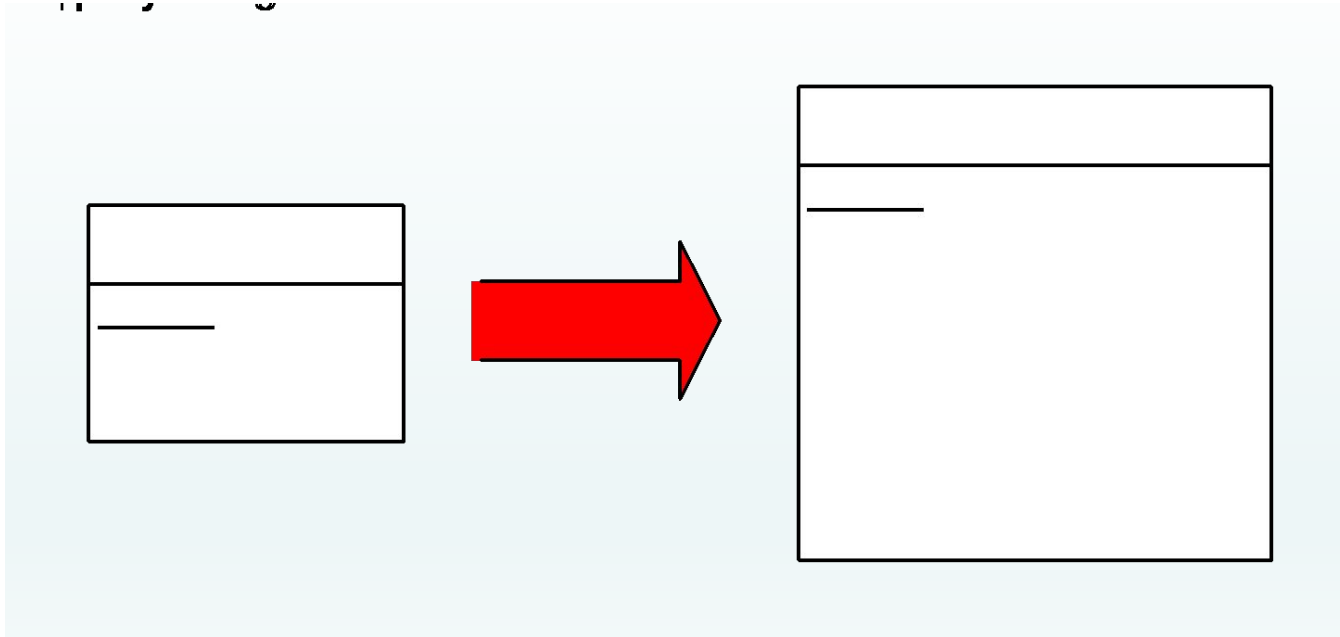
# Attribute History II



# 1-M Relationship History



# Limited Attribute History



# Reverse Transformations

- Not as common as main transformations
- Typically used for simplification
- Reverse transformations
  - Contract entity type
  - Combine attributes
  - Contract entity type structure
  - Strong entity type to weak entity type
  - Remove history





# Summary

- History expansion for attributes
- History expansion for relationships
- Transformation reversing
- Importance in data warehouse design

