Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program

# Module 11
# Normalization Concepts and Practice

## Lesson 4: Practical Concerns

# Lesson Objectives

- Reflect on role of normalization

- Reflect on importance of normalization

- Reflect on situations to relax normalization requirements

# Competing Roles of Normalization

- Refinement
  - Use after ERD
  - Few FDs
- Initial Design
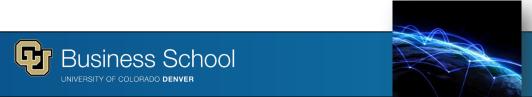  - FDs first
  - ERD after FDs

# Normalization Importance

- Update biased
- Not a major concern for databases without updates (data warehouses)
- Relax normalization sometimes

# Denormalization

- Purposeful violation of a normal form
- Some FDs may not cause anomalies in practice
- May improve performance
- Common for data warehouses

# Denormalization Example

- ZipCode → City, State
- Important for ecommerce business for sales tax
- May be important for ecommerce databases

# Summary

- Covered practical issues
- Use normalization as a refinement approach
- Do not lose context of normalization when performing details