



Business School
UNIVERSITY OF COLORADO DENVER

Information Systems Program

Module 11

Normalization Concepts and Practice

Lesson 4: Practical Concerns

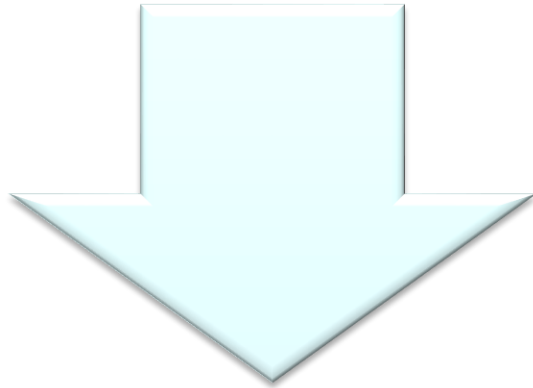


Lesson Objectives

- Reflect on role of normalization
- Reflect on importance of normalization
- Reflect on situations to relax normalization requirements



Competing Roles of Normalization



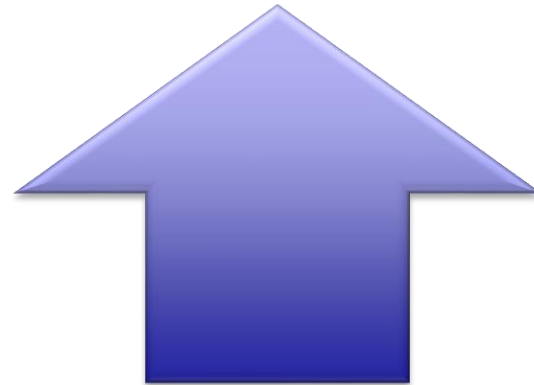
Refinement

- 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

