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Relational Databases Unit

Lesson 4: Design Processes

Objectives

- Outline the basic process for designing and implementing a relational database

Design Process Overview

- Mission statement and objectives
- Create data structures
- Determine and establish table relationships
- Determine and define business rules
- Determine and establish views
- Review data integrity

Define Mission Statement and Objectives

- Mission statement defines the purpose of the database
- Mission objectives define the tasks that are to be performed by users against the database

Create Data Structures

- Establish tables by identifying the subjects that will be tracked in the database
- Assign fields (attributes) to tables
- Determine primary keys
- Define the type and domain of each attribute

Determine Table Relationships

- Identify relationships that exist between the tables
- Establish the relationships through foreign keys and/or linking tables
- Set the characteristics of each relationship

Determine Business Rules

- Determine the constraints placed on the database due to the way the organization uses the database
- These constraints are declared as business rules

Review Data Integrity

- Review each table to ensure that it meets the design criteria
- Review and check all field (domain) specifications
- Test the validity of each relationship
- Confirm business rules