Module 3
Relational Data Model and
CREATE TABLE Statement

Lesson 2: Integrity Rules

Lesson Objectives

- Identify 1-M relationships and associated PKs and FKs

- Find errors in rows with either orphan FKs or missing FKs

- Identify situations for FK requirements
  - FK is necessary
  - FK can have the null value

Integrity Rules

- Entity integrity: primary keys
  - Each table has column(s) with unique values
  - No missing values for primary keys
  - Ensures traceable entities
- Referential integrity: foreign keys
  - Values of a column in one table match values from a source table
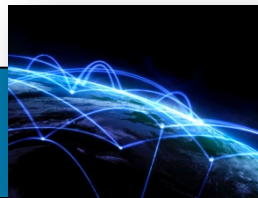 - Ensures valid references among tables
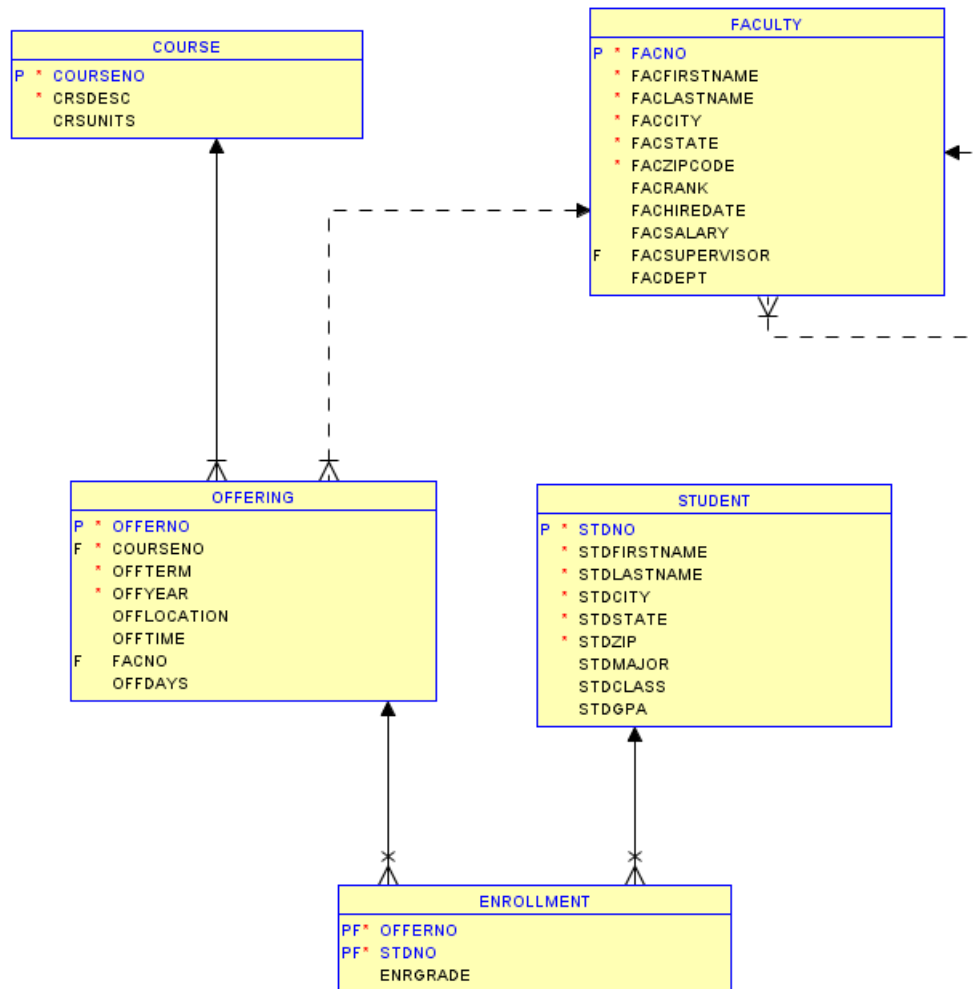
Integrity Rule Violations

Student

StdNo	StdLastName
123-45-6789	WELLS
124-56-7890	KENDALL
234-56-7890	NORBERT
--	JONES

Offering

OfferNo	CourseNo
1234	IS320
4321	IS320

Enrollment

StdNo	OfferNo
123-45-6789	1234
234-56-7890	1234
123-45-6789	4321
124-56-7890	4321
234-56-7890	6789
--	4321

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Oracle Relational Diagram

Business School
UNIVERSITY OF COLORADO DENVER

Information Systems Program

Summary

- Identify primary keys and foreign keys

- Visualize relationships

- Understanding existing databases is crucial to query formulation