

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



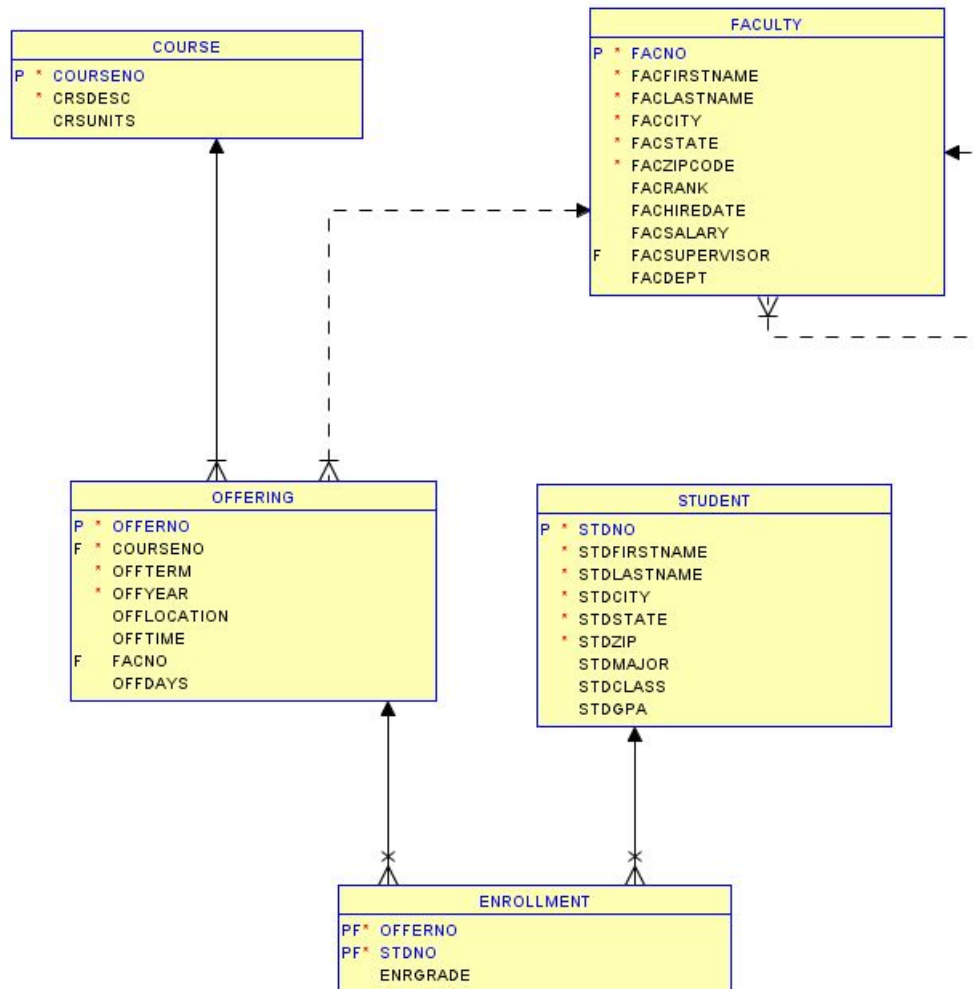
Integrity Rule Violations

Student		Offering	
<u>StdNo</u>	<u>StdLastName</u>	<u>OfferNo</u>	<u>CourseNo</u>
123-45-6789	WELLS	1234	IS320
124-56-7890	KENDALL	4321	IS320
234-56-7890	NORBERT		
--	JONES		

Enrollment	
<u>StdNo</u>	<u>OfferNo</u>
123-45-6789	1234
234-56-7890	1234
123-45-6789	4321
124-56-7890	4321
234-56-7890	6789
--	4321



Oracle Relational Diagram



Summary

- Identify primary keys and foreign keys
- Visualize relationships
- Understanding existing databases is crucial to query formulation

