
ORACLE
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Database Design

3-4
Matrix Diagrams

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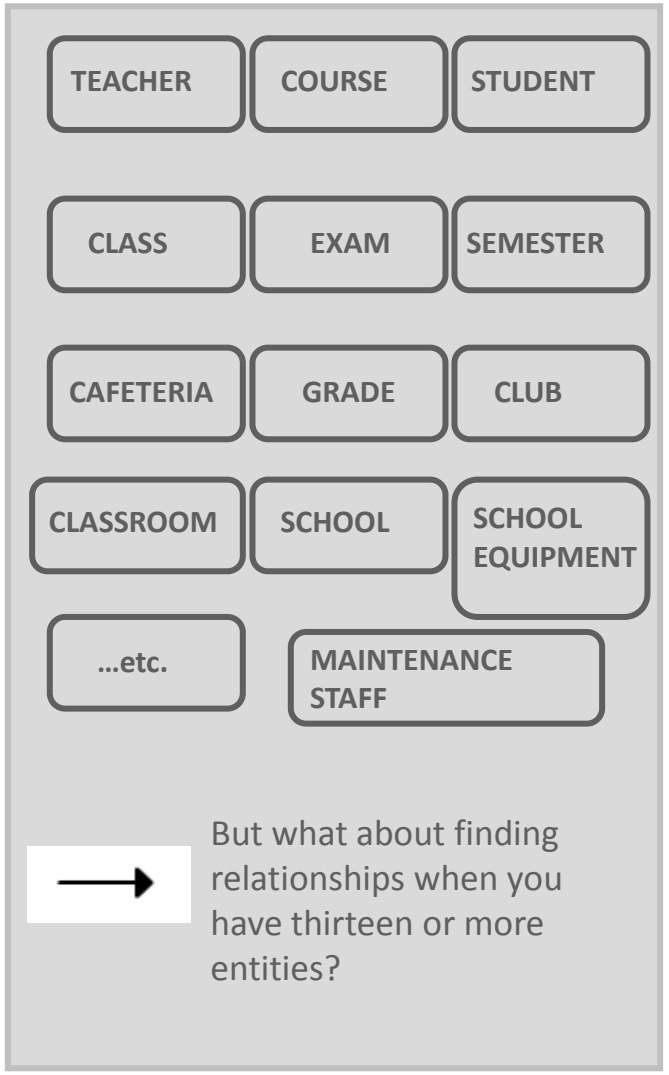
Objectives

This lesson covers the following objectives:

- Identify relationships using a matrix diagram
- Draw an ERD from a matrix diagram

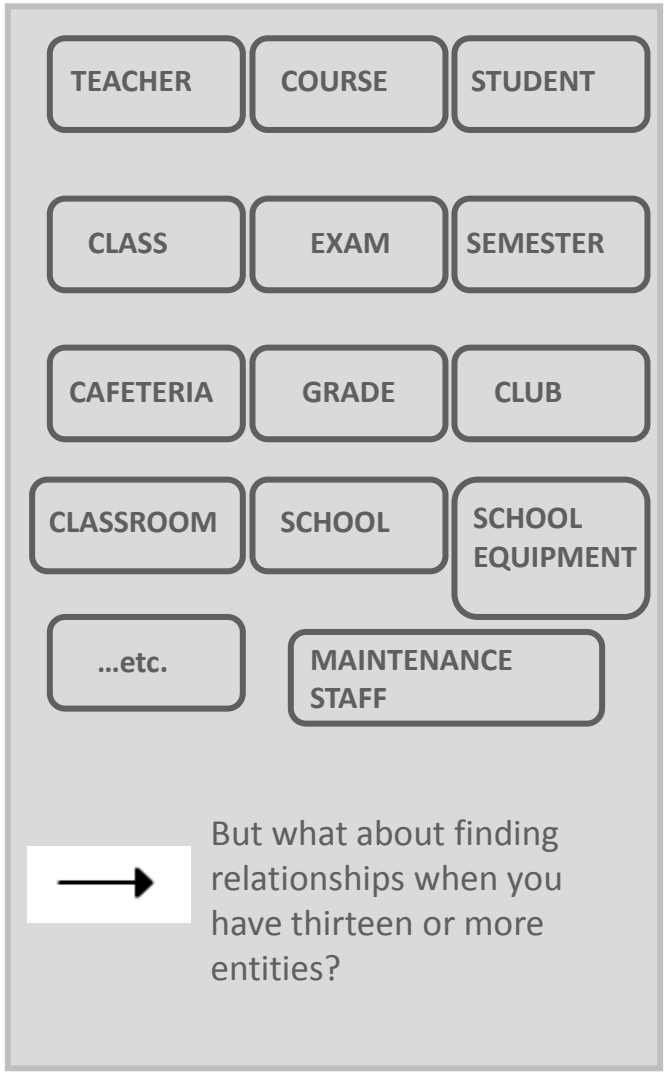
Purpose

- It is useful to know more than one way to discover relationships.



Purpose

- Using a matrix diagram, especially when you are dealing with many entities, is a good way to make sure that you haven't missed any relationships.



Business Scenario

- "I work for a travel agency. I keep a record of the countries that our customers have visited and the landmarks they've seen in each country. It helps us customize tours for them."
- We can use the matrix diagram to uncover relationships.

	TRAVELER	COUNTRY	LANDMARK
TRAVELER			
COUNTRY			
LANDMARK			

MATRIX DIAGRAM

Matrix Diagrams

- To avoid confusion, be consistent in writing to and reading from the matrix only in one direction.

	TRAVELER	COUNTRY	LANDMARK
TRAVELER		visit	have seen
COUNTRY	visited by		the location of
LANDMARK	seen by	located in	

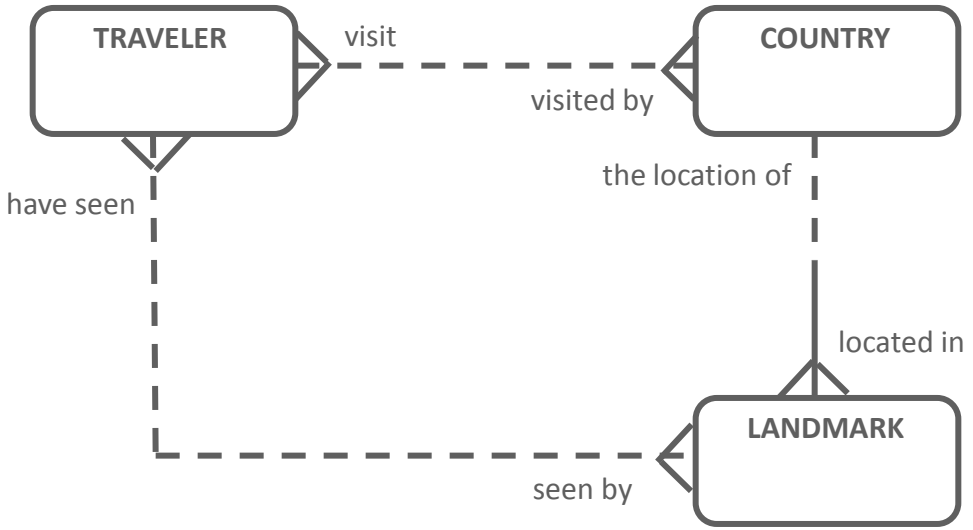
correct: COUNTRY visited by TRAVELER
correct: LANDMARK seen by TRAVELER

incorrect: TRAVELER visited by COUNTRY
incorrect: TRAVELER seen by LANDMARK

Matrix Diagrams

- Relationships discovered via the matrix diagram are then drawn on the ERD.
- Matrix diagrams do not show optionality and cardinality.

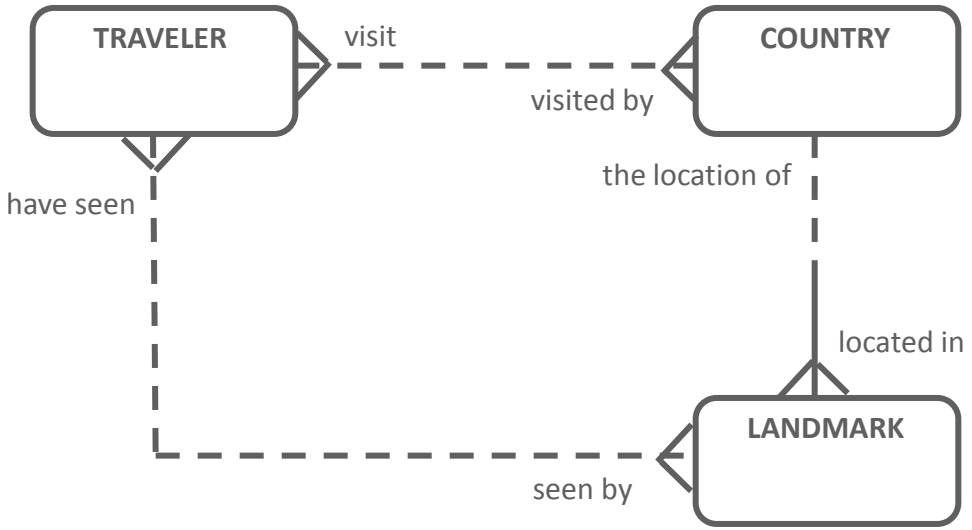
	TRAVELER	COUNTRY	LANDMARK
TRAVELER		visit	have seen
COUNTRY	visited by		the location of
LANDMARK	seen by	located in	



Matrix Diagrams

- Each COUNTRY may be visited by one or more TRAVELERs.
- Each TRAVELER may visit one or more COUNTRY.

	TRAVELER	COUNTRY	LANDMARK
TRAVELER		visit	have seen
COUNTRY	visited by		the location of
LANDMARK	seen by	located in	



Terminology

Key terms used in this lesson included:

- Matrix diagram

Summary

In this lesson, you should have learned how to:

- Identify relationships using a matrix diagram
- Draw an ERD from a matrix diagram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