



# ORACLE

## Academy

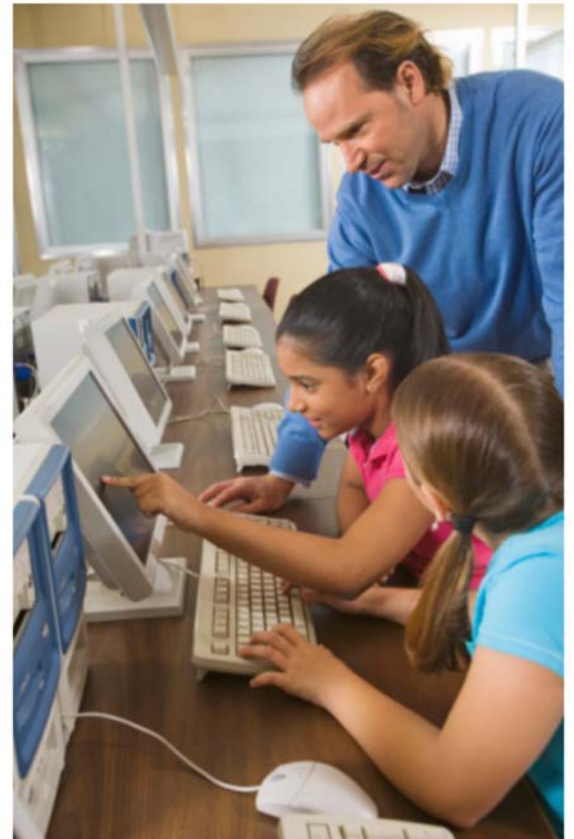


# Database Design

3-4

Matrix Diagrams

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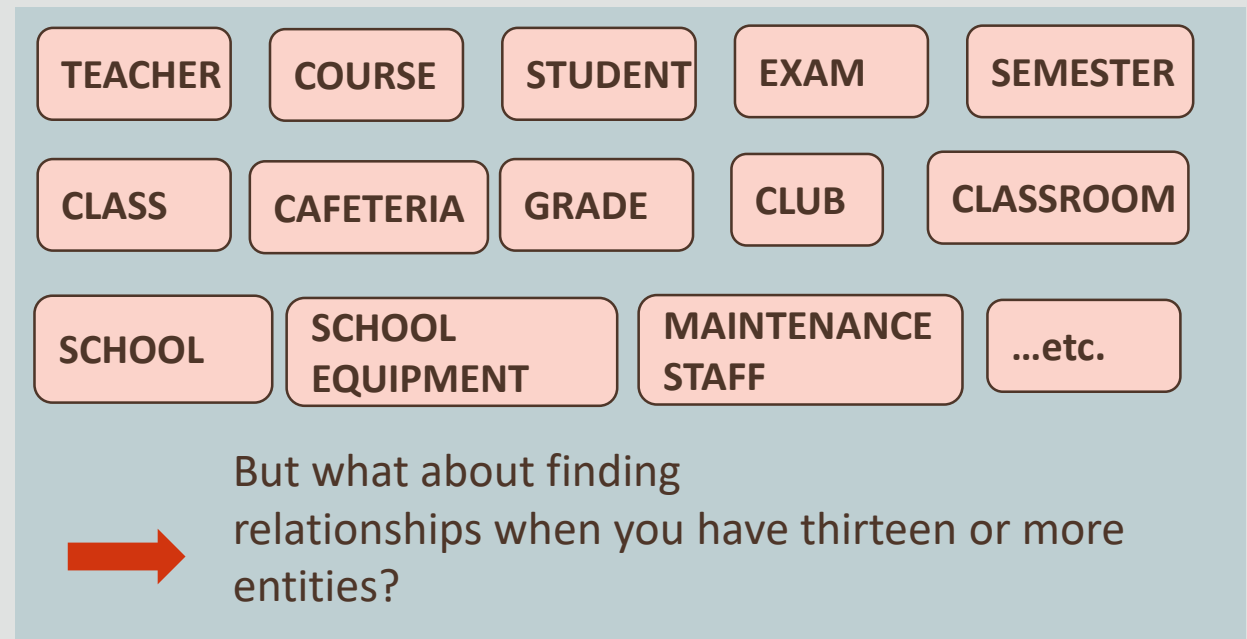
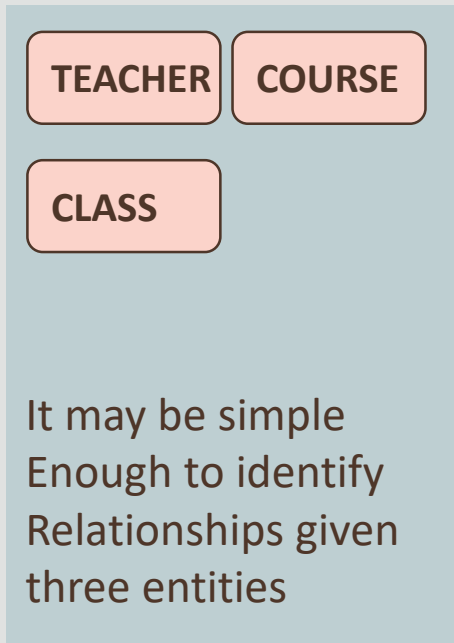


# Objectives

- This lesson covers the following objectives:
  - Identify relationships using a matrix diagram
  - Draw an ERD from a matrix diagram

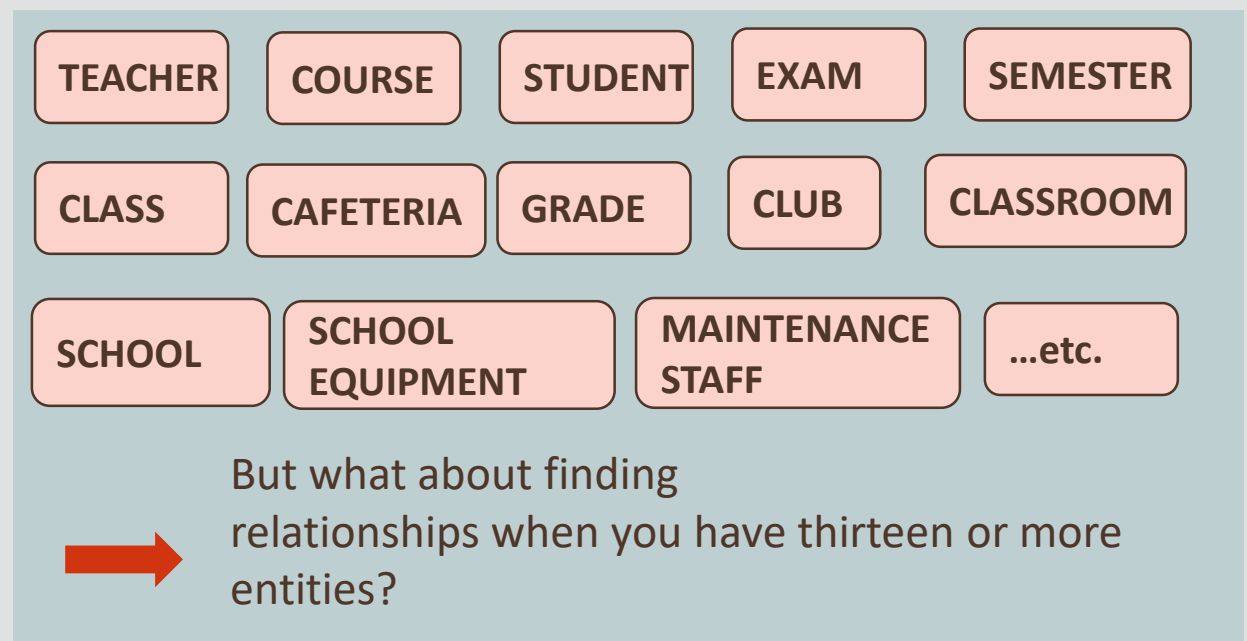
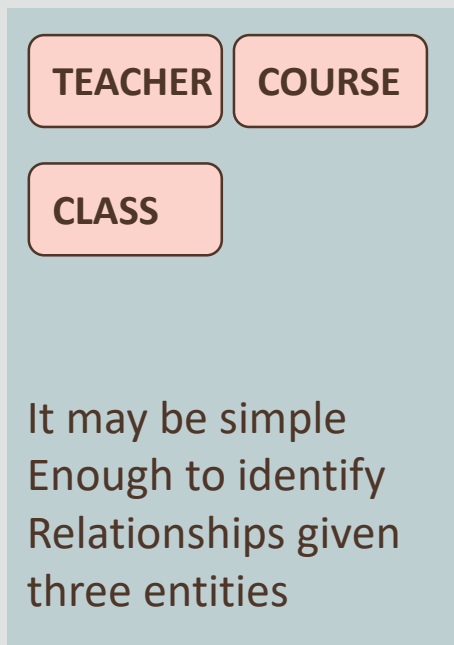
# Purpose

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



# Purpose

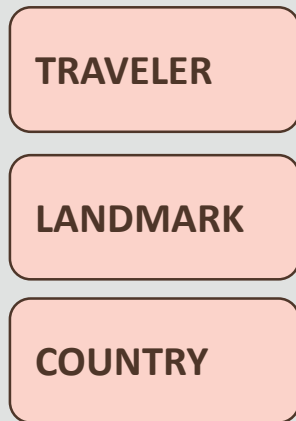
- Using a matrix diagram, especially when you are dealing with many entities, is a good way to make sure that you haven't missed any relationships



# 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

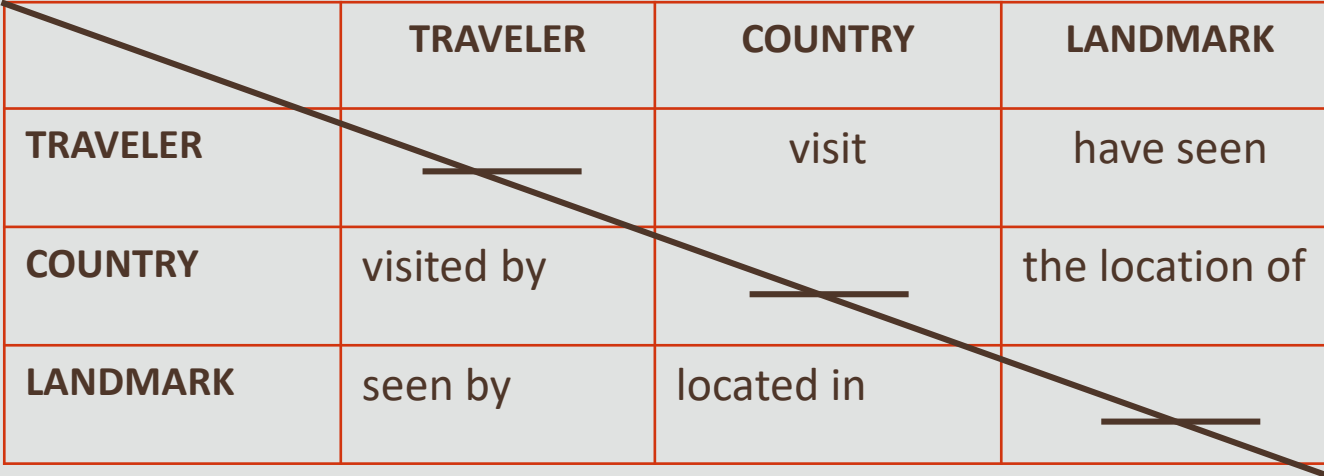
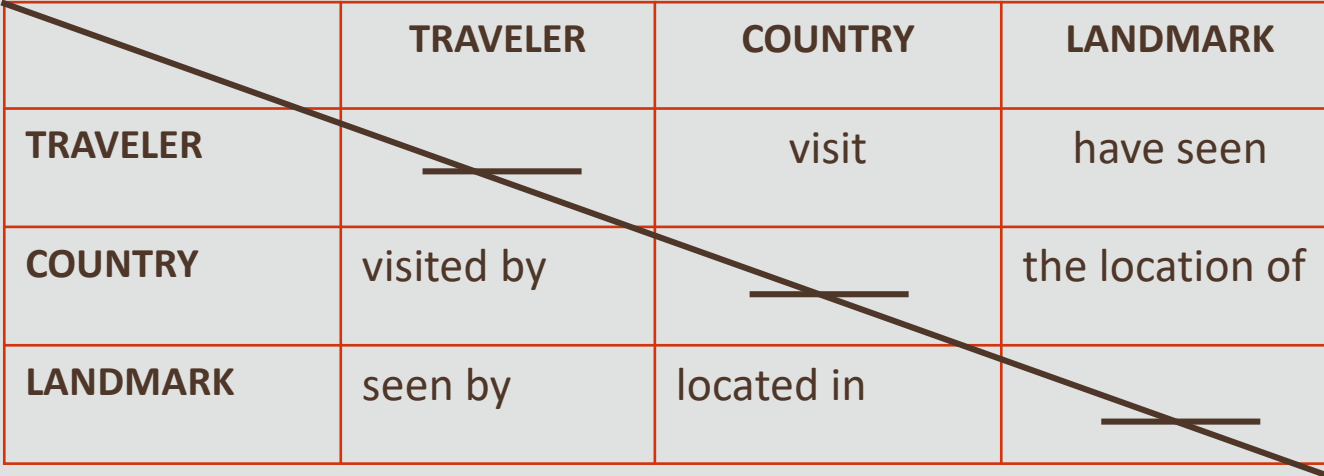
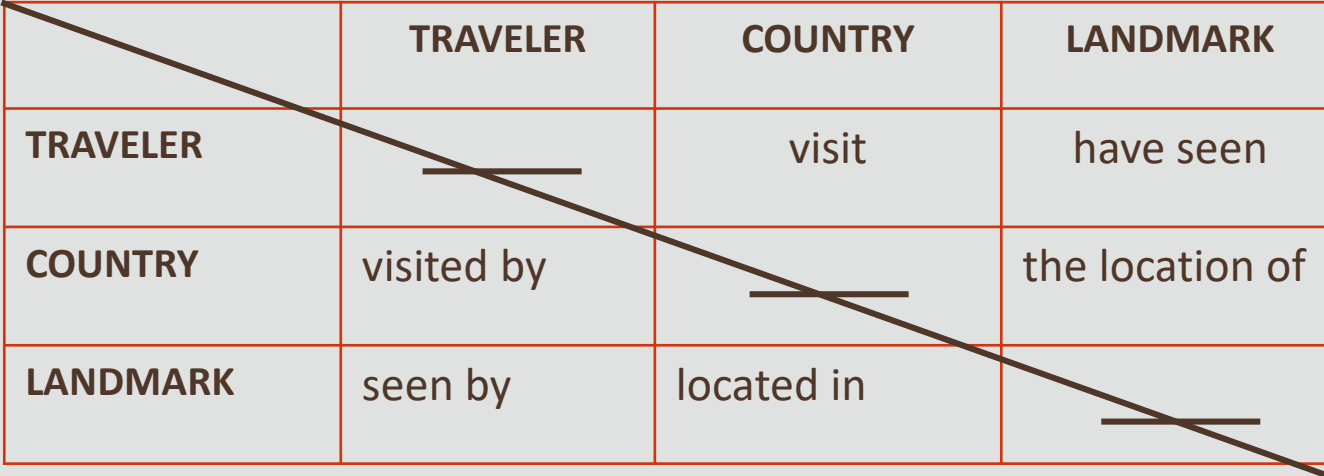
MATRIX DIAGRAM



	TRAVELER	COUNTRY	LANDMARK
TRAVELER			
COUNTRY			
LANDMARK			

# 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

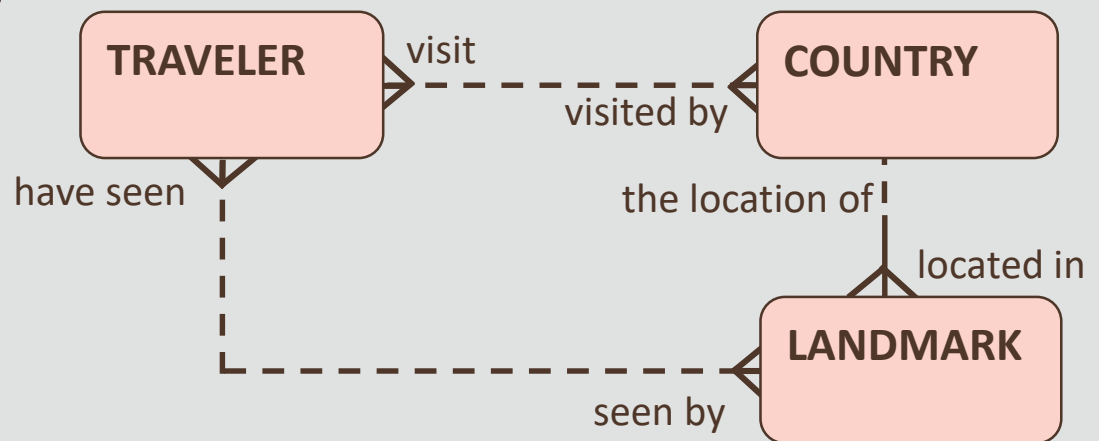
**incorrect:** TRAVELER visited by COUNTRY

**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	<hr/>	visit	have seen
COUNTRY	visited by	<hr/>	the location of
LANDMARK	seen by	located in	<hr/>

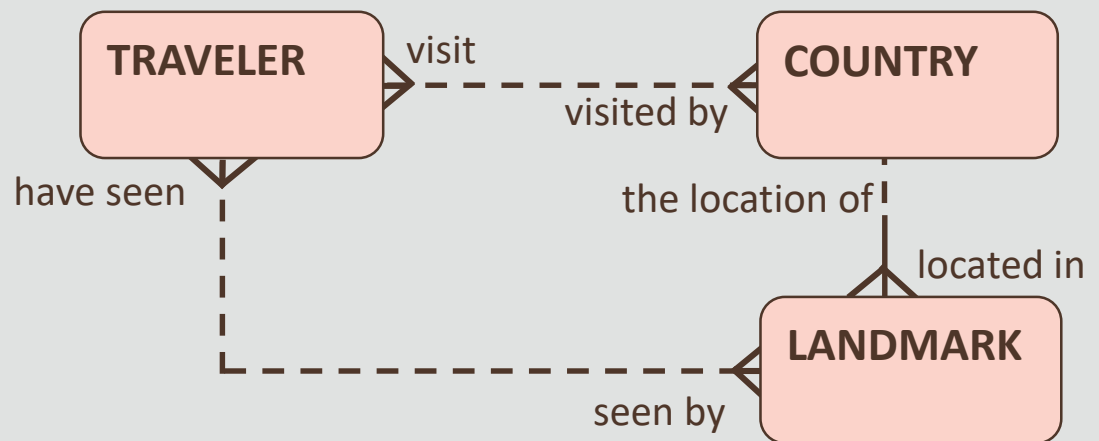




# Matrix Diagrams

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

	TRAVELER	COUNTRY	LANDMARK
TRAVELER	<hr/>	visit	have seen
COUNTRY	visited by	<hr/>	the location of
LANDMARK	seen by	located in	<hr/>



# 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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