

Perancangan Basis Data(IFWP1007)

3 sks



Major: Informatics
Topic: Matrix Diagrams



Dosen Pengampu

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Skills





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.

TEACHER

COURSE

CLASS

It may be simple enough to identify relationships given three entities.

TEACHER

COURSE

STUDENT

CLASS

EXAM

SEMESTER

CAFETERIA

GRADE

CLUB

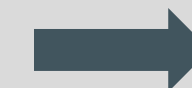
CLASSROOM

SCHOOL

SCHOOL
EQUIPMENT

...etc.

MAINTENANCE
STAFF

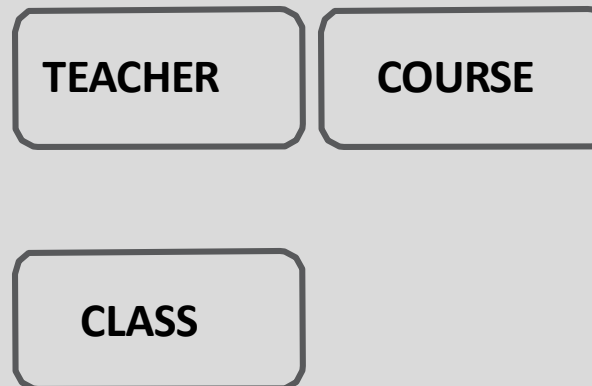


But what about finding relationships when you have thirteen or more entities?

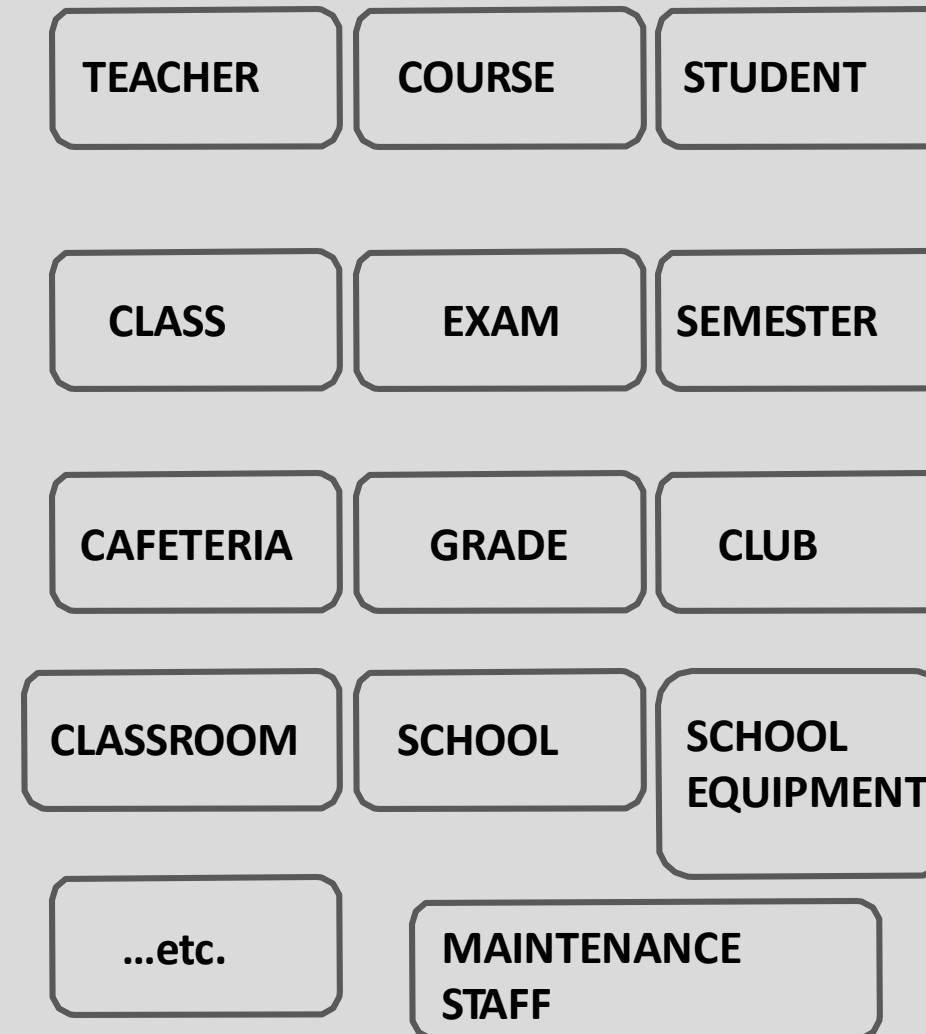


Purpose

- 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.



It may be simple enough to identify relationships given three entities.

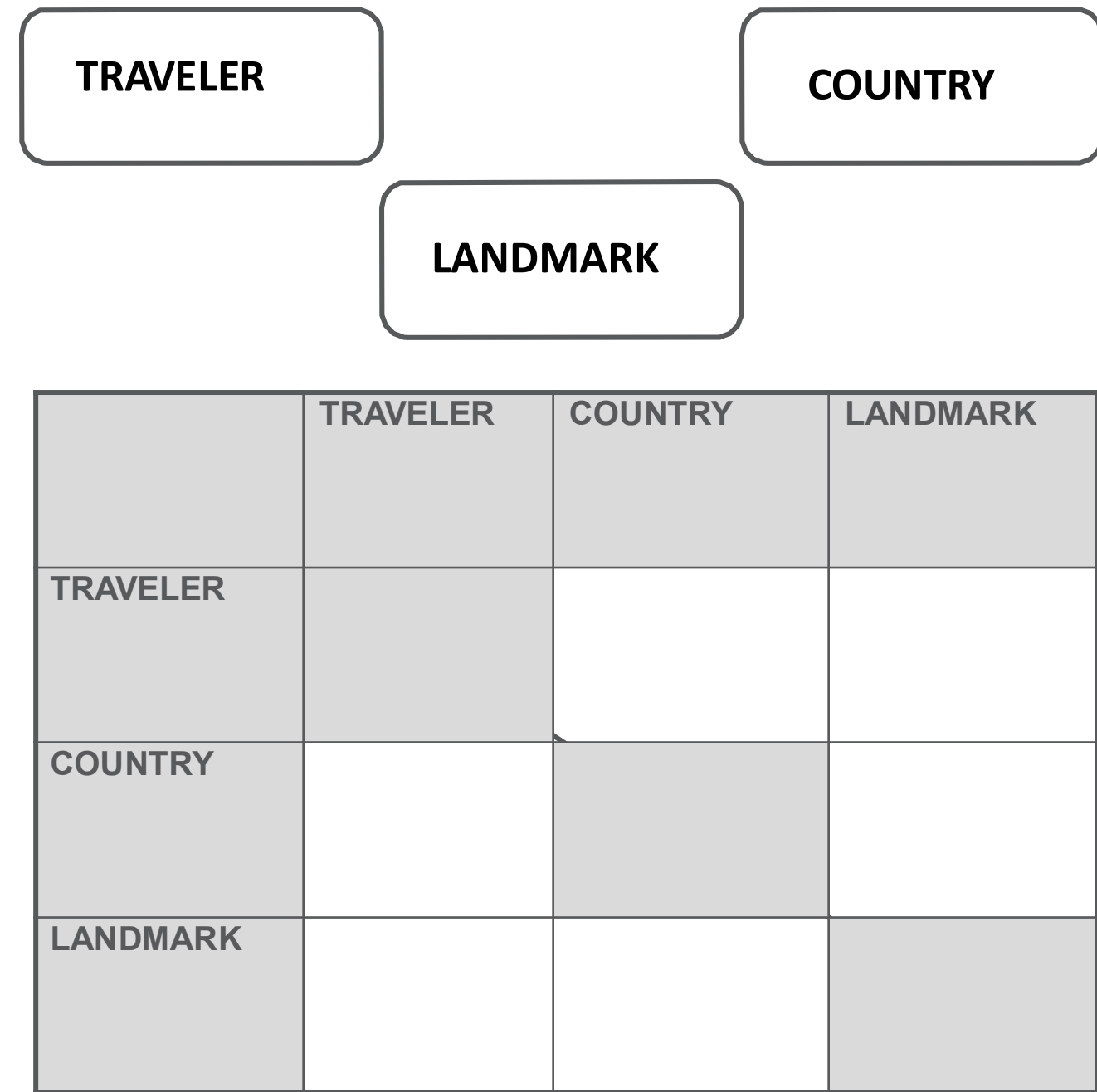


But what about finding relationships when you have thirteen or more entities?



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



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

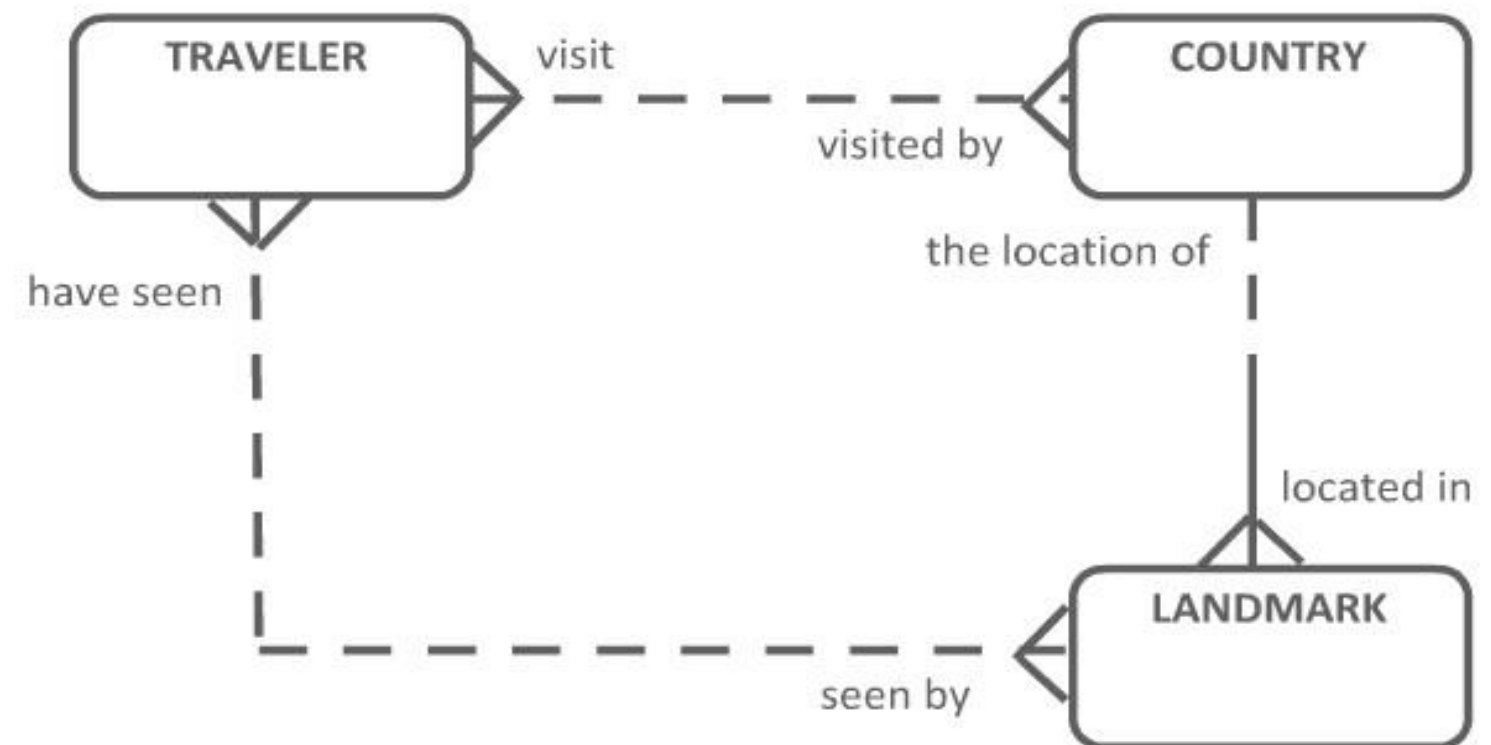
incorrect: TRAVELER seen by LANDMARK



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	—

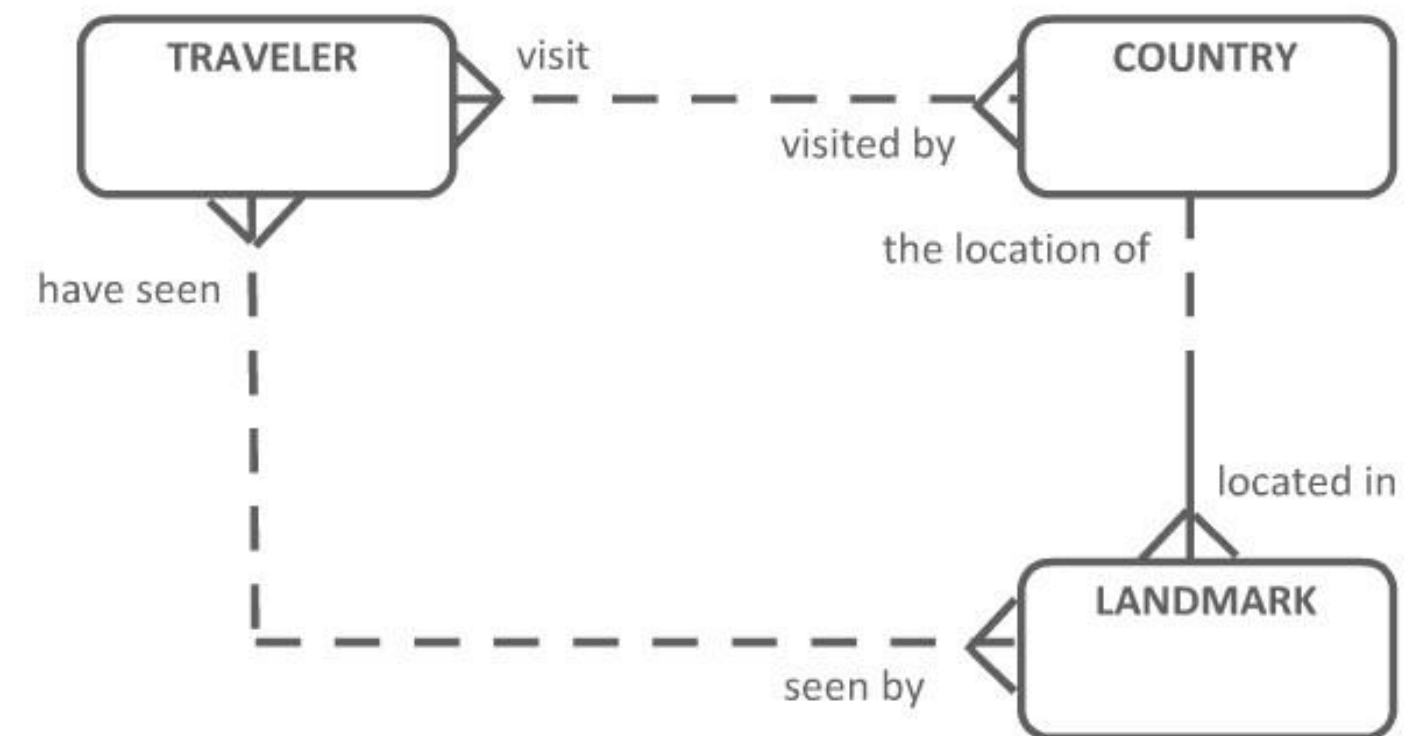




Matrix Diagrams

- 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

Thank You

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