

The logo for Oracle Academy is centered on a light gray background. It features the word "ORACLE" in a bold, orange, sans-serif font. Below it, the word "Academy" is written in a smaller, dark gray, sans-serif font. The entire logo is framed by two horizontal dark gray bars, one at the top and one at the bottom.

ORACLE

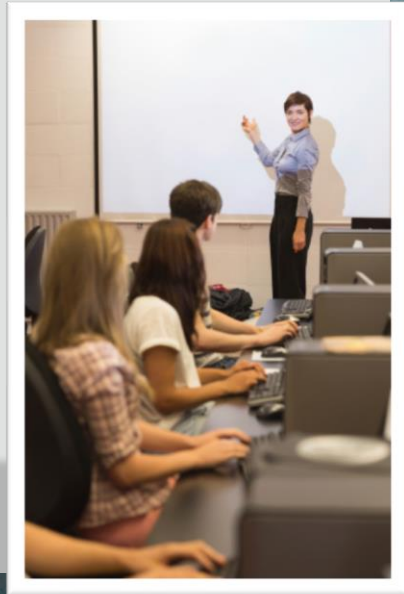
Academy

Database Design

5-1

Relationship Transferability

ORACLE
Academy



Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Objectives

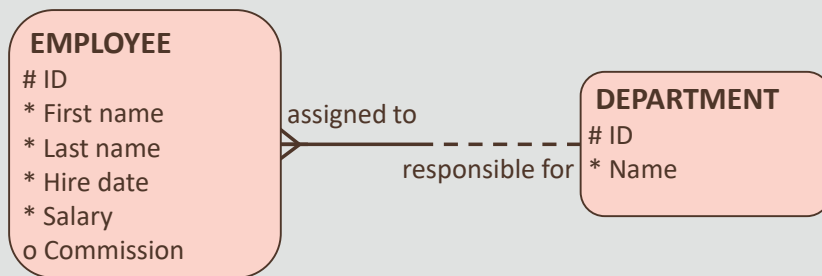
- This lesson covers the following objectives:
 - Describe and give an example of relationship transferability
 - Understand the difference between transferable and nontransferable relationships
 - Illustrate nontransferable relationships on ERDs

Purpose

- Once a class has been allocated to a teacher, can that class later be transferred to another teacher, possibly in mid-semester?
- Usually yes, because if not, what would we do if the original teacher becomes sick?
- Some health clubs allow memberships to be transferred from one person to another, but other health clubs don't
- This business rule is normally determined by what is most efficient and most profitable for the club

Relationship Review

- Let's review a simple relationship between EMPLOYEE and DEPARTMENT
- Optionality:
 - Must every EMPLOYEE be assigned to a DEPARTMENT?
 - Must every DEPARTMENT be responsible for an employee?



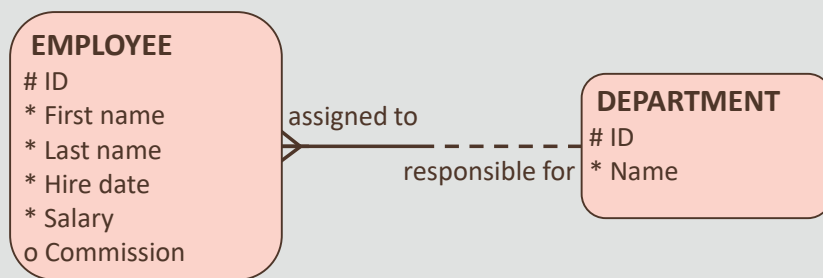
Can you have an EMPLOYEE not assigned to a DEPARTMENT? ANSWER: NO, so relationship is drawn as mandatory (solid line).

Can you have a DEPARTMENT not responsible for any EMPLOYEES? ANSWER: It depends on the business rules of the company in question, but in this case YES "We have some departments that currently have no employees assigned to them", so relationship is drawn as optional (dashed line).

Relationship Review

- Cardinality:

- How many EMPLOYEES can a DEPARTMENT be responsible for?
- How many DEPARTMENTS can an EMPLOYEE be assigned to?



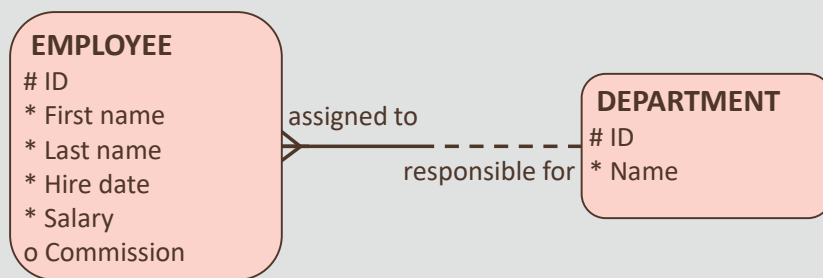
ANSWER:

Each DEPARTMENT is responsible for one or more employees, so we draw a crows foot at the EMPLOYEE side of the relationship.

Each EMPLOYEE can be assigned to only one DEPARTMENT , so we draw a single toe at the DEPARTMENT side of the relationship

Relationship Review

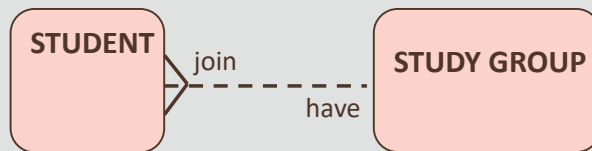
- Transferability:
 - Can an EMPLOYEE be transferred from one DEPARTMENT to another DEPARTMENT?



Answer: yes, an EMPLOYEE can change from one DEPARTMENT to another. This makes the relationship transferable.

Relationship Transferability

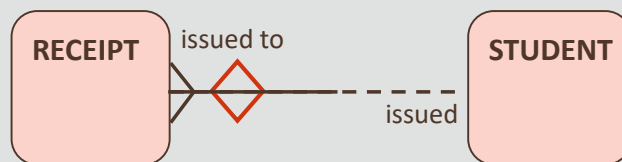
- Transferable: A STUDENT being allowed to move from one STUDY GROUP to another
- There is a relationship between STUDENT and STUDY GROUP that is transferable



Transferable Relationship

Relationship Transferability

- Nontransferable: A STUDENT can be issued a RECEIPT for paying tuition fees, taking a certification exam, or purchasing items at the bookstore
- Once a RECEIPT has been issued, it cannot be transferred to another STUDENT



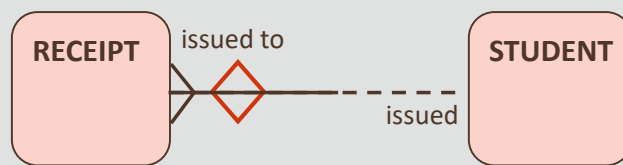
Nontransferable Relationship

A nontransferable relationship is represented with the diamond on the relationship

Nontransferable: If the transferability of a relationship is false, the relationship is said to be nontransferable. Nontransferable relationships are important to note because they usually reflect a business rule and will have implications when the ERD is implemented as a database.

Relationship Transferability

- If it was issued in error, it would have to be cancelled, and another RECEIPT would have to be written up
- The relationship between STUDENT and RECEIPT is nontransferable



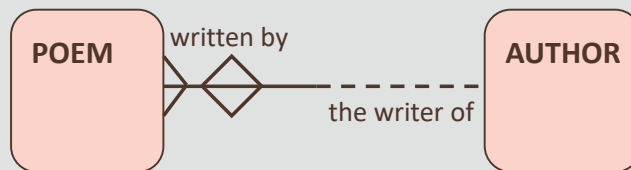
Nontransferable Relationship

A nontransferable relationship is represented with the diamond on the relationship

The diamond is typically drawn on the “many” (crows-foot) side of the relationship.

More Nontransferable Relationships

- Ownership of a POEM belongs with its AUTHOR
- Authorship is a relationship that cannot be moved to another person



Terminology

- Key terms used in this lesson included:
 - Nontransferable
 - Transferable

Summary

- In this lesson, you should have learned how to:
 - Describe and give an example of relationship transferability
 - Understand the difference between transferable and nontransferable relationships
 - Illustrate nontransferable relationships on ERDs

