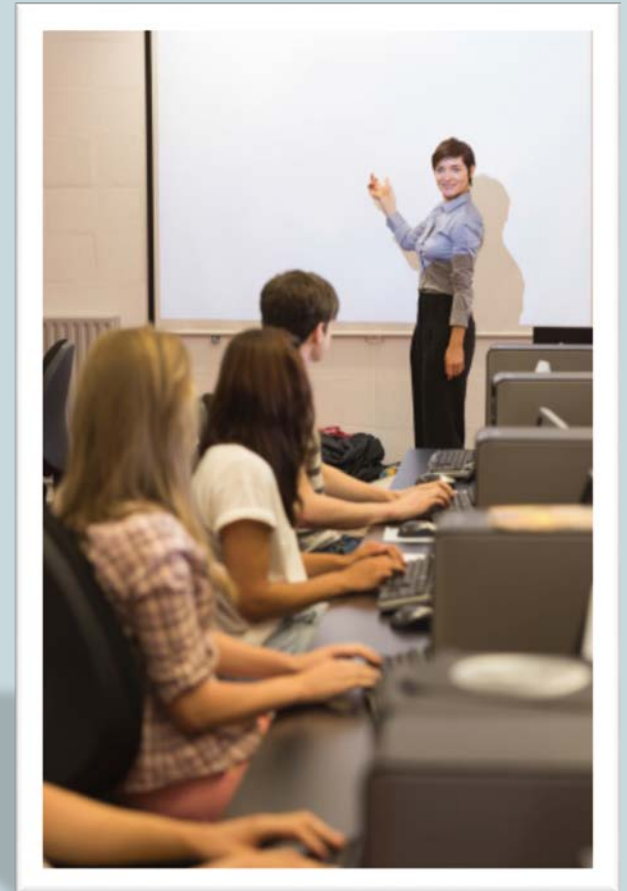




Database Design

5-1

Relationship Transferability



Objectives

This lesson covers the following objectives:

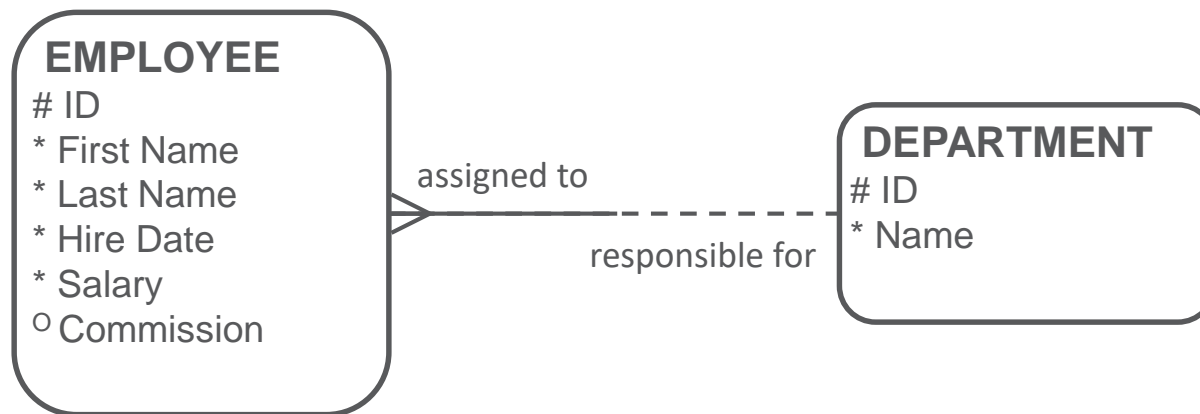
- Describe and give an example of relationship transferability
- Understand the difference between transferable and nontransferable relationships
- Illustrate nontransferable relationships on ERDs

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.

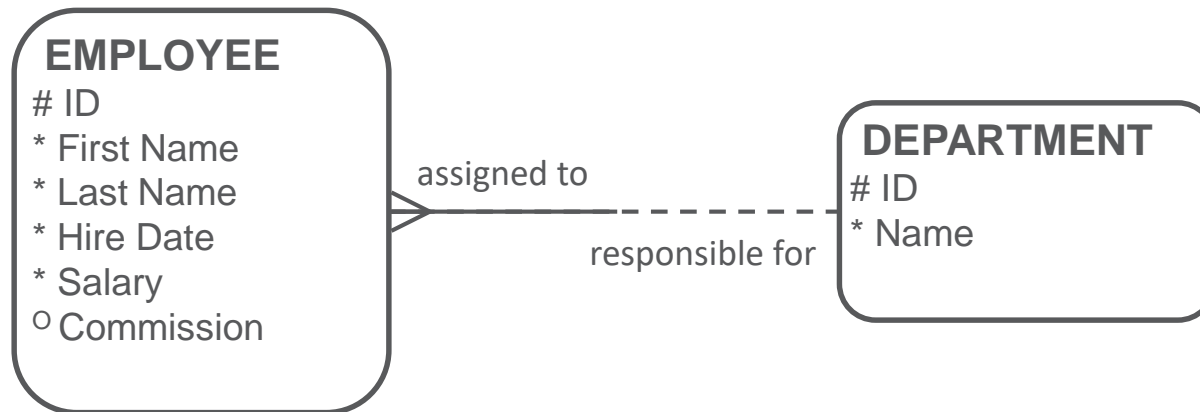
Relationship Review

- 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?



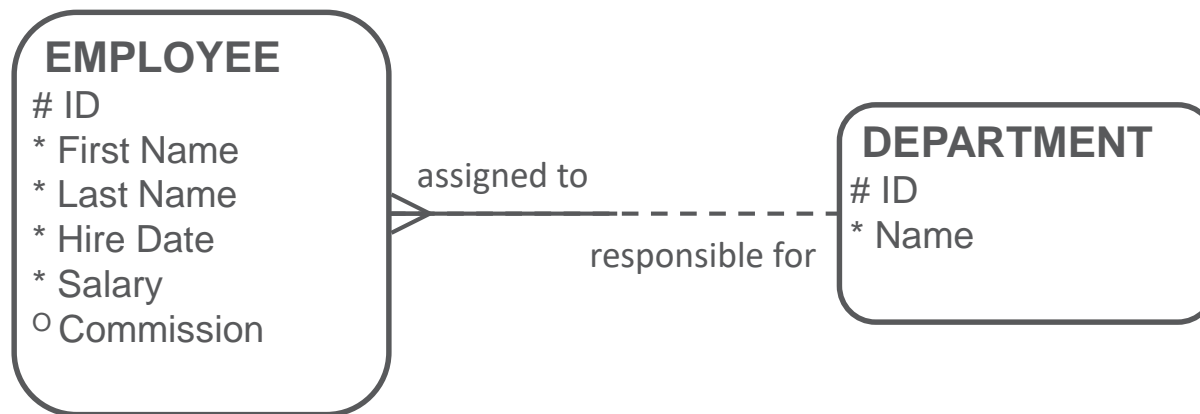
Relationship Review

- Cardinality:
 - How many EMPLOYEEs can a DEPARTMENT be responsible for?
 - How many DEPARTMENTS can an EMPLOYEE be assigned to?



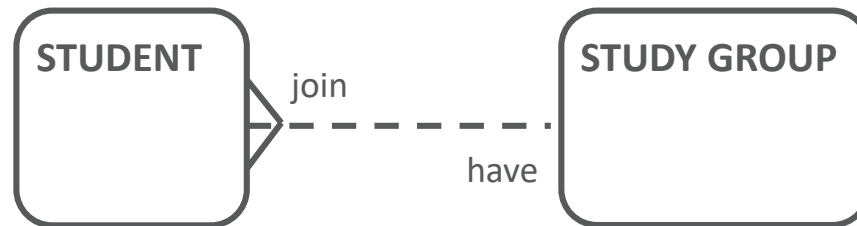
Relationship Review

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



Relationship Transferability

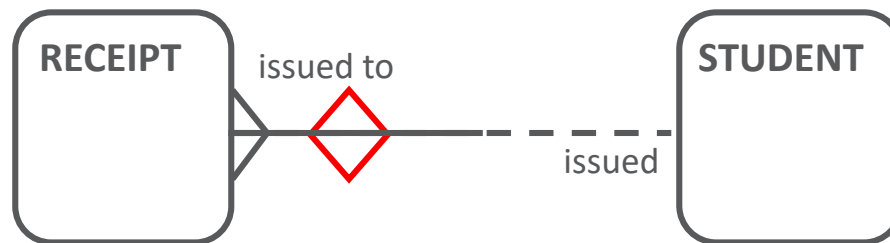
- Transferable: A STUDENT being allowed to move from one STUDY GROUP to another.
- There is a relationship between STUDENT and STUDY GROUP that is transferable.



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.

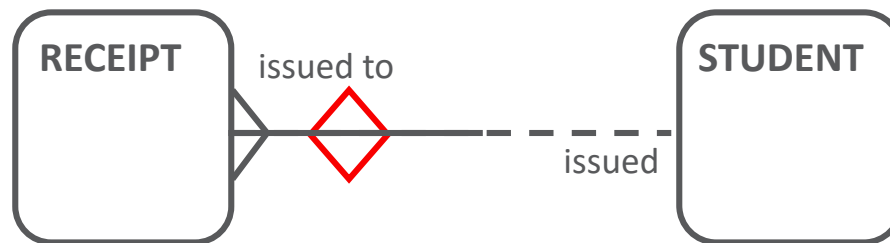


Nontransferable Relationship

A nontransferable relationship is represented with the diamond on the relationship.

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.

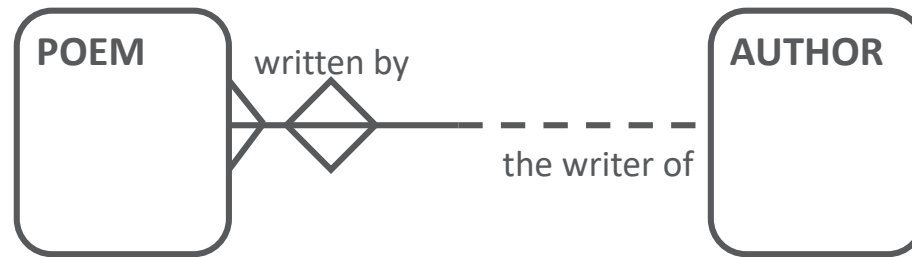


Nontransferable Relationship

A nontransferable relationship is represented with the diamond on the relationship.

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

