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.
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