



Relationships

Relational Database Design

Session Outline

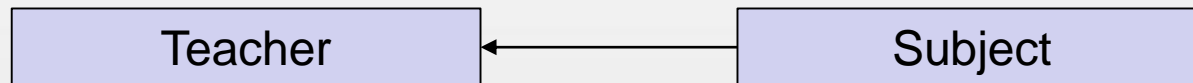
- What a relationship is
- Different types of relationships

Relationships

- What is a relationship?
- It's a way of describing how two tables are related or joined to each other
- Tables can be created without being related to each other
- Achieve better quality data with relationships
- Four main types of relationships

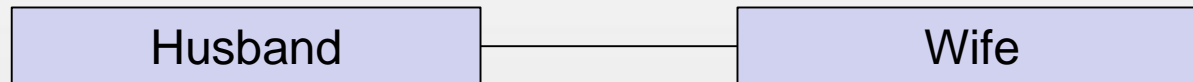
One to Many

- One to many relationship
- Most common kind of relationship
- One X has many Y's
- E.g. a teacher has many subjects, but a subject can have only one teacher



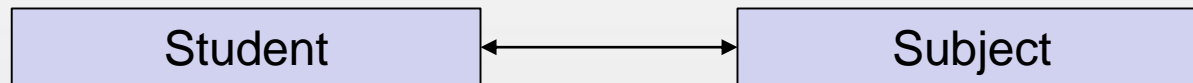
One to One

- One to One relationship
- One X has one Y
- Not very common
- E.g. a husband has only one wife, and a wife has only one husband



Many to Many

- Many X has many Y's
- Not ideal in relational database design
- Common relationship
- E.g. a student has many subjects, and a subject has many students



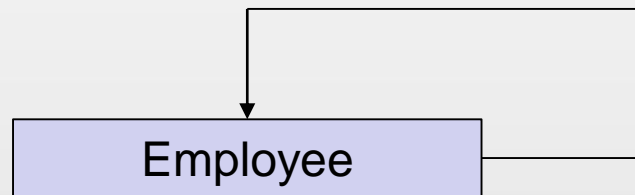
Many to Many

- How can this be stored effectively? It's hard to manage a many to many relationship using these tables.
- By using a joining table
- A joining table goes in the middle of the relationship, which creates two one to many relationships



Self Relationship

- This is where a table joins to itself
- It's used occasionally, depending on what you're storing
- Used where there is a relationship between two records, but they are in the one table
- E.g. an employee has a manager, but the managers also have managers, and managers are employees too



Summary

- Relationships are how tables are related
- Four main types:
 - One to many
 - One to one
 - Many to many
 - Self relationship

Action

- None at the moment, proceed to the next lesson

What's Next?

- Learn about second normal form and apply it to our database