Combine Different Data Sets Easily

Relational Database Design

Session Outline

- Looking at another advantage of relational databases – combining data sets

Multiple Tables

- Relational databases have many tables
- Tables store data for each component
- Records in tables have a unique identifier
- Data in tables can be related to each other (e.g. student and class tables)

Linking Tables

- Getting data from one table is easy enough, by using a query
- What if you want to see data from multiple tables?
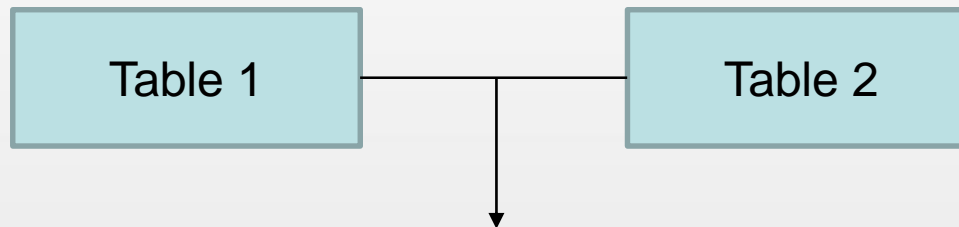- How do you link them? The records are separate

Table 1

Table 2

Linking Tables

- Relational databases allow you to use a query to link multiple tables
- A unique identifier for a record is needed (some kind of ID column)
- This can be linked to the other table
- Can be repeated many times for complex data sets

Usage

- This is very helpful for many reasons

- Data analysis often uses many tables

- Applications that view the database often need complicated queries to view the data they need

Filters

- When you view data, whether it's from one table or many, you often need to restrict the data you get

- This filtering can be done easily with relational databases

- Tables contain similar data for components

- Data can be filtered on tables easily

Summary

- Linking data in many tables is easy using relational databases
- Filtering can also be done on these tables to get the data that is needed

What's Next?

- A further look at some of the advantages of relational databases