Increased Security

Relational Database Design

Session Outline

- How increased security is achieved with relational databases

Access to Data

- Many applications may access this database
- Many users may also access this database
- You might not want to give access to all of the data to all applications and users

Access to Data

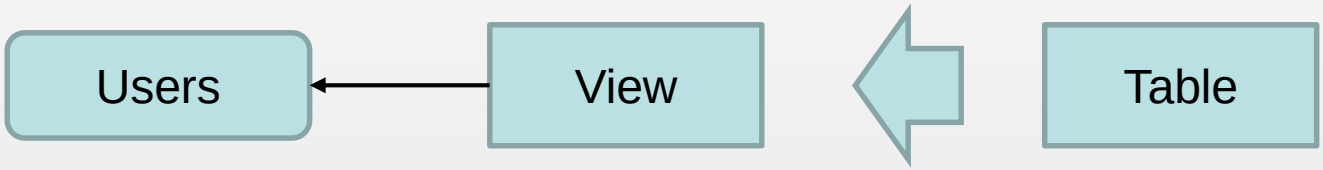
- This can be done easily with relational databases
- Many database management systems have built-in security settings:
  - Users
  - Privileges
- There is another way to restrict access to data

Data Views

- You can restrict data that is seen by an application by using a “view”
- A view is a subset of data from one or more tables
- You can use a view to specify what people or applications are allowed to see or update

Data Views

- Underlying table has all the data
- View is created to limit only to data that is needed
- Access is given to the view
- Underlying table is not seen



Specific Tables

- Access to certain tables can be limited as well
- This is done easily in relational databases
- For example:
  - School database
  - A teacher may only be able to see class information and grades, but not student personal information
  - A student may only be able to see class names and their grades, but not teacher personal information

Summary

- Security can be increased by using data views and restricting access to certain tables
- This depends on what you want to restrict

What's Next?

- Look at the process for designing a database and what's involved