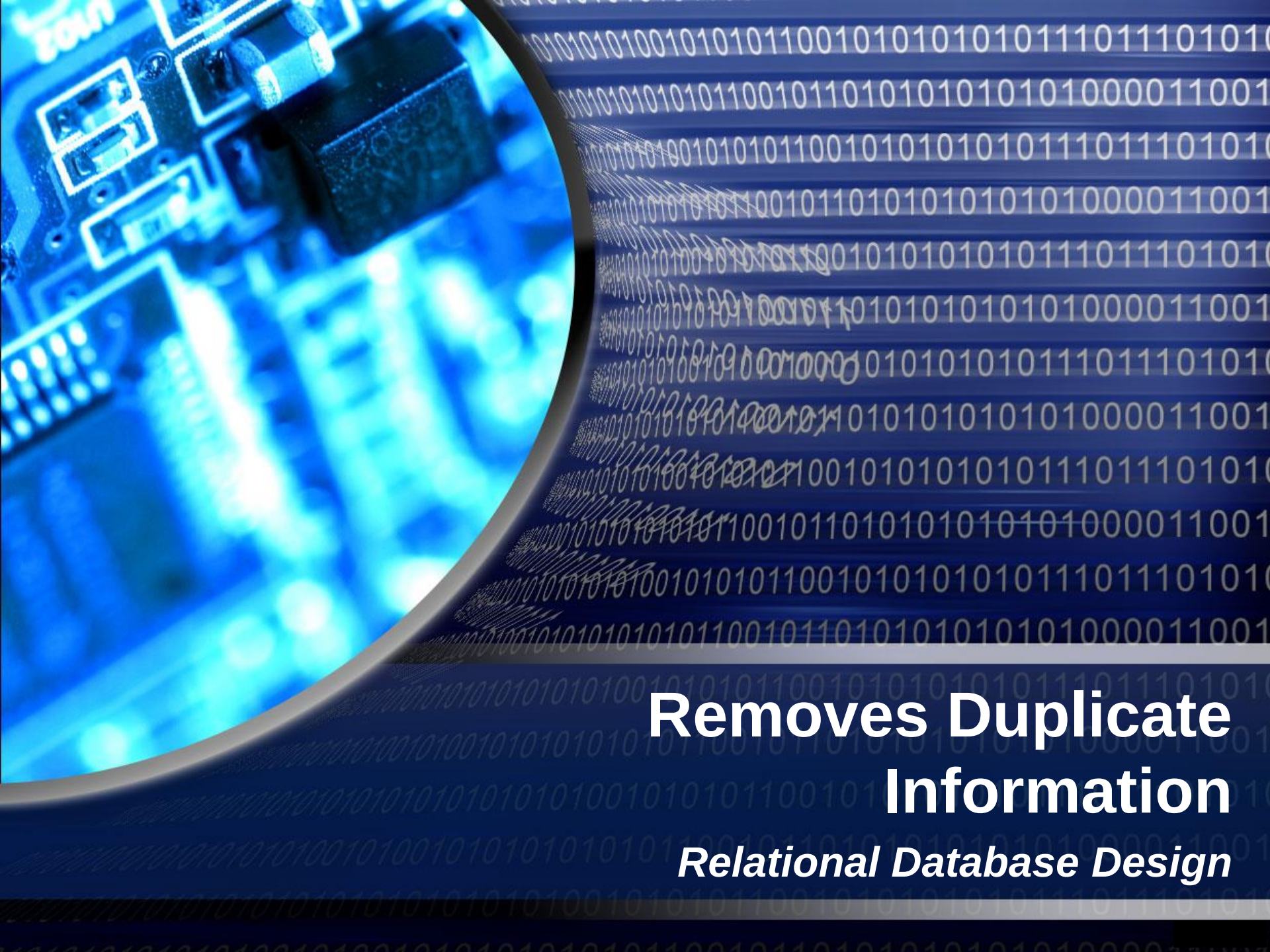

Removes Duplicate Information

Relational Database Design

Session Outline

- Another benefit of a relational database: removing duplicate information

Duplicate Information

- Duplicate information is bad
- It’s inefficient
- Why would we store the same thing more than once?

Example

- Let’s say you had a school
- The school has information about students
  - John Smith
  - Steve Jones
  - Alan Brown
- The school also has information about classes, and who attended them
  - Maths: John Smith, Steve Jones
  - Science: Alan Brown, Steve Jones
- What if John Smith changed his name to Jason?
- Where would you update it?

Example

- Students - John Smith
- Classes - Maths: John Smith, Steve Jones
- You need to update the name in the Students table, as well as the name in the Classes table
- This is twice the work and twice the computing power
- What if you forget to do one? It’s possible
- Data will be incorrect and inconsistent
- Can cause all kinds of problems

Remove Duplicates

- Storing data in one place is the aim
- Always stored in the one place
- Easier to update – only one thing to update
- Easier to find – only one place to look

Example

- Let’s say you had a store
- This store had a products table
- Products table has name of product and price
- What if you wanted to update the price?
- Just change one record in a table

Design

- When you design your database, removing duplicate information should be something you consider and something that you aim for

Summary

- Removing duplicate information is a benefit of a well-designed relational database
- It’s something we will consider in a later lesson when we go through the design process

What's Next?

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