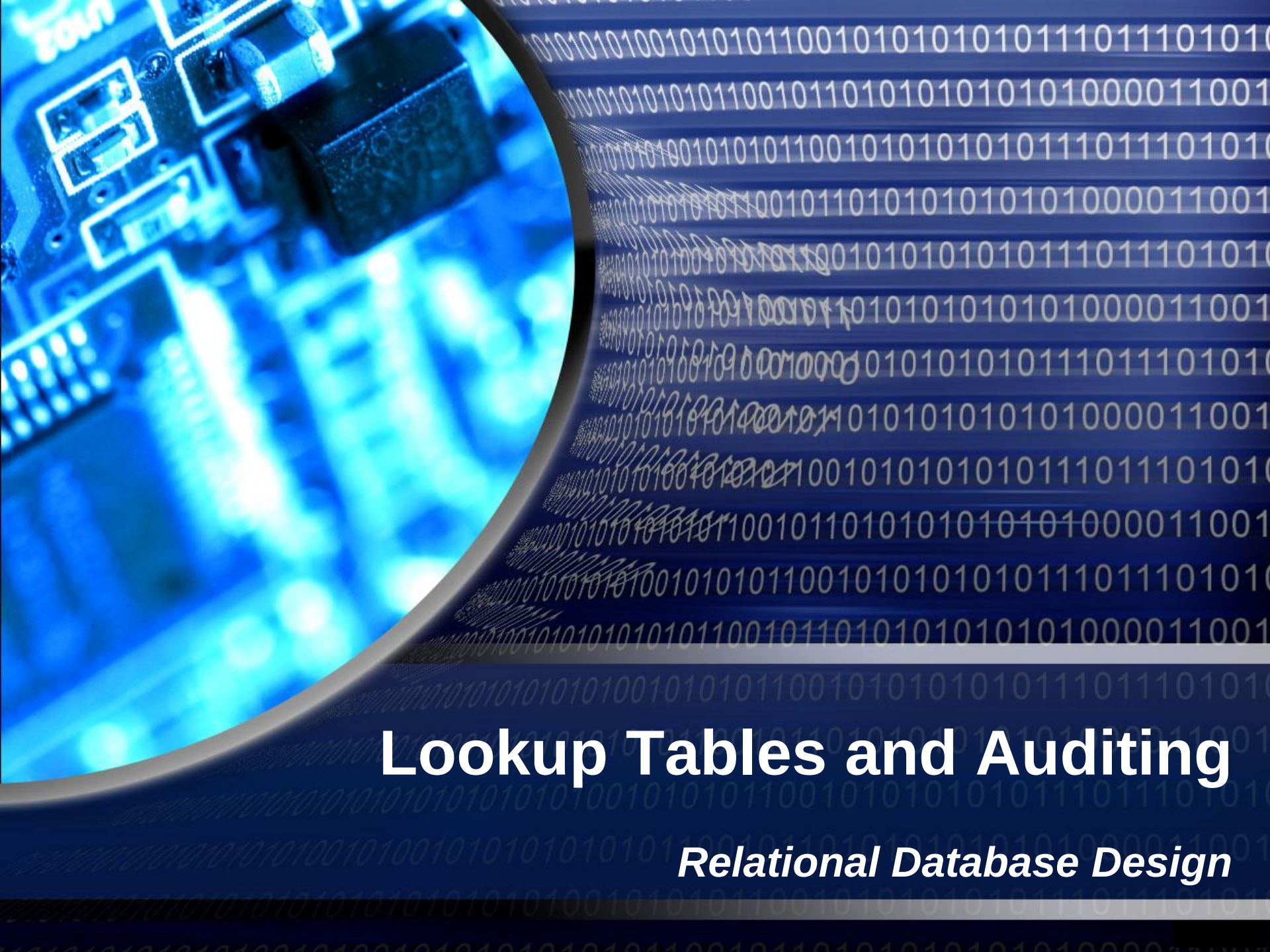

Lookup Tables and Auditing

Relational Database Design

Session Outline

- Learn about lookup tables and how auditing can work

Lookup Tables

- What is a lookup table?
- Also called a reference table
- Contains data that is used by the system
- Looked up by the system for various purposes
- Not usually linked to any other tables – it's usually standalone
- Ensures that the information is kept separate from any systems using it

Lookup Table Examples

- Some examples of lookup tables are
- User tables (a list of users)
- Version history (a history of versions of the application or database)
- Debugging settings (logging information and debugging levels)

Auditing

- Auditing is where you need to keep a history of changes to a table
- This would be implemented in the database logic, or even the system that uses it

Auditing Fields

- Auditing processes may contain fields such as:
- Created Time – date and time that the record was created
- Created By – refers to the user or application that created the record
- Updated Time – date and time that the record was updated
- Updated By – refers to the user or application that updated the record

Auditing Tables

- There may be other tables created for keeping an audit log of these records
- For example, using our student table
- We may want to keep track of all the changes made to a record
- We could add these four fields
- Then create an audit table which is the same structure
- Write some code so that whenever the student record is updated:
  - The old record is inserted in the audit table
  - The record is updated in the current table
- Both lookup tables and auditing tables are optional, so I won't include them in our example database

Summary

- Lookup or reference tables are usually standalone tables that contain data used by other applications
- Auditing can be done by keeping track of when records have changed in a table using certain fields
- They are both optional and depend on your requirements

Action

- None for this session

What’s Next?

- Conclusion and more information