Finding Exceptions to the Rules

Relational Database Design

Session Outline

- Learn how to find and ask about exceptions to the rules – as they always exist and can cause problems

Exceptions and Rules

- Databases are built on rules
- Data is related in a certain way
- Fields have a certain type
- When speaking to other people, be aware of exceptions to the rules
- They can cause your data model to break

The Most Dangerous Word

- There is one word that is dangerous when it comes to data modelling
- That word is **usually**
- It's often used by people when describing something that is almost always true
- When designing a database, you need to know if something is definitely true or false
- "Usually" means that it's not certain
- If someone says usually – expand on it, find out the details
- Finding the problem now will save a lot of time and effort later

Future Growth

- Databases should cater for future growth
- They should many last years if designed well enough
- Technology can change but the data model should stay the same

Example

- Customer IDs are currently 4 digits
- This means values can be 0000 to 9999
- What if the business expands and gets more than 10,000 customers?
- Customer ID 10000 can’t be stored
- Database should be changed to increase the size of the field from 4 to something larger
- This is similar to the Y2K problem

Data Types

- When you design a database, you assign different types to fields
- These types can have restrictions
- They should only be restricted if the rule definitely can’t be broken

Data Type Example

- Product price should always be 2 decimal places
- These prices can’t be 3 decimal places
- So, making it 3 decimal places isn’t needed

Summary

- Databases are built on rules
- Exceptions to these rules can cause problems if they are not determined early
- Watch out for the word “usually”

Action

1. For each of your requirements, determine if there are any exceptions to the rules
2. Question any specific field length or type restrictions, as they may need to be increased in a later stage

What's Next?

- We get started with designing our database!