A very short introduction to databases

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About me

- Database administrator for three years
- Technical consultant at IBM
- FAC 9
- Back-end developer at Lighthouse – LEMP stack
- Thick client webapps – React/Redux

About Lighthouse

- Digital product development agency
- Nine staff
  - Two back-end developers
  - Two front-end developers
  - One UX designer
- Clients include DrinkAware, BBPA
- Invented databases

Previous experience?

Questions?

Concerns?

Before we start…

- Concepts, not implementation
- Tortured metaphors
- Relational databases

What is a database?

What is a database?

A database is a model of the real-world scenario that your application deals with.

This is broken down into real-world things (entities) that your website deals with, along with their relevant properties (fields) and relationships (relationships).

Why would you use one?

Exercise 1:

Why use a library when
you already have a bookcase?

How does it fit together?

Key database concepts

	Real world	**Databases**
Language	English (UK vs US)	SQL (syntax differences)
Database Management System	Library	PostgreSQL, MySQL
Database	Collection of books	Database
Schema	Classification system	Schema
Client	Library terminal, librarian	PSQL, node-postgres

Exercise 2:

What kind of relationships exist between people?
What type of relationships are they?

Relationships

Relationship	**Type**
Biological mother -> child	One to many
Friend -> Friend	Many to many
Boss -> Employee	One to many
Nemesis	One to one
Lover	Many to many
Siblings	Trick question
Client	Many to many
Acquaintance	Many to many

Final thoughts

- Designing a schema means understanding a situation
- Useful as reference tools
- Often no single correct way to design a schema
- Choices have consequences

Questions?