

# Define Data model and identify entities within the problem domain

Tags: Data, Data model, Database, Entity-relationship (ER) diagrams

## Considerations when building a database

- **Content**: What data should be collected and at what cost?
- **Access**: Which data should be provided to which users and when?
- **Logical Structure**: How should data be arranged so that it makes sense
- **Physical organization**: Where should data be physically located?

## Data Modeling and Data Models

- In general terms, a **model** is an abstraction of a more complex real-world object or event.
- Within the information technology and engineering domain, **data models** define how **data** is connected to each other and how they are processed and stored in the system

### Data model

*a diagram of data entities and their relationships:*

- Enterprise data modeling: data modeling done at the level of the entire enterprise

### Entity-relationship (ER) diagrams

*data models that use basic graphical symbols to show the organization of and relationships between data*

Simplified ER Diagram ExcaliDraw

### Data Entities, Attributes, and keys

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