# Normalization vs Denormalization

# Star schema

# Snowflake schema

# Fact and dimension tables

# Data marts

# Database layers

We can structure data in a database in such a way that we create layers, where:

* Each layer is a group of datasets with specific characteristics
* Data from one layer is used to create data in another layer

For example we might a structure like this:

* **Source system db** – The first data layer. One db per source system, called for example 01\_System\_1, 01\_System\_2.
* **02\_Transformed db** – The second layer consisting of transformed data. There will be a separate schema per each source system, called for example System\_1, System\_2.
* **DWH** – The third layer with data for reports.

The DWH db should have the following schemas:

* **Common** – for common dimensions
* **Reference** – for reference data
* **Business function specific schemas** – for every business function (operations, finance etc) there will be a separate schema.

# Slowly changing dimensions