**Database design:**   
Database design is the organization of data according to a database model. The designer determines what data must be stored and how the data elements interrelate

Different types of relations

<https://blog.devart.com/sql-database-design-basics-with-example.html>

* **Normalization** Normalization is the process to eliminate data redundancy and enhance data integrity in the table. Normalization also helps to organize the data in the database. It is a multi-step process that sets the data into tabular form and removes the duplicated data from the relational tables.

However, normalization when decomposing entities (tables) results in a more complex query build for data manipulation (insertion, update, selection, and deletion).

The opposite process is denormalization. It simplifies query processing for data access by means of adding redundant data

**Normailization forms:**

<https://www.edureka.co/blog/normalization-in-sql/>

https://www.geeksforgeeks.org/second-normal-form-2nf/?ref=lbp

<https://www.geeksforgeeks.org/third-normal-form-3nf/>

* **Different keys:**

<https://www.analyticsvidhya.com/blog/2020/07/difference-between-sql-keys-primary-key-super-key-candidate-key-foreign-key>

A superkey is a combination of columns that uniquely identifies any row within a relational database management system (RDBMS) table. A candidate key is a closely related concept where the superkey is reduced to the minimum number of columns required to uniquely identify each row.

**An attribute that is not part of any candidate key is known as non-prime attribute(which is repeatative).** **An attribute that is a part of one of the candidate keys is known as prime attribute**.

<https://beginnersbook.com/2015/04/candidate-key-in-dbms/>