RDBMS Normalization:

**Database normalization**, or simply **normalisation**, is the process of organizing the [columns](https://en.wikipedia.org/wiki/Column_(database)) (attributes) and [tables](https://en.wikipedia.org/wiki/Table_(database))(relations) of a [relational database](https://en.wikipedia.org/wiki/Relational_database) to minimize [data redundancy](https://en.wikipedia.org/wiki/Data_redundancy).

Normalization involves decomposing a table into less redundant (and smaller) tables without losing information, and then linking the data back together by defining [foreign keys](https://en.wikipedia.org/wiki/Foreign_Key) in the old table referencing the [primary keys](https://en.wikipedia.org/wiki/Primary_Key) of the new ones. The objective is to isolate data so that additions, deletions, and modifications of an attribute can be made in just one table and then propagated through the rest of the database using the defined foreign keys.

[Edgar F. Codd](https://en.wikipedia.org/wiki/Edgar_F._Codd), the inventor of the [relational model](https://en.wikipedia.org/wiki/Relational_model) (RM), introduced the concept of normalization and what we now know as the [First normal form](https://en.wikipedia.org/wiki/First_normal_form) (1NF) in 1970.[[1]](https://en.wikipedia.org/wiki/Database_normalization#cite_note-Codd1970-1) Codd went on to define the [Second normal form](https://en.wikipedia.org/wiki/Second_normal_form) (2NF) and [Third normal form](https://en.wikipedia.org/wiki/Third_normal_form) (3NF) in 1971,[[2]](https://en.wikipedia.org/wiki/Database_normalization#cite_note-Codd.2C_E.F_1971-2) and Codd and [Raymond F. Boyce](https://en.wikipedia.org/wiki/Raymond_F._Boyce) defined the Boyce-Codd Normal Form ([BCNF](https://en.wikipedia.org/wiki/Boyce%E2%80%93Codd_normal_form)) in 1974.[[3]](https://en.wikipedia.org/wiki/Database_normalization#cite_note-CoddBCNF-3) Informally, a relational database table is often described as "normalized" if it meets Third Normal Form.[[4]](https://en.wikipedia.org/wiki/Database_normalization#cite_note-DateIntroDBSys-4) Most 3NF tables are free of insertion, update, and deletion anomalies.