What is RDBMS

RDBMS stands for *Relational Database Management Systems.*.

All modern database management systems like SQL, MS SQL Server, IBM DB2, ORACLE, My-SQL and Microsoft Access are based on RDBMS.

It is called Relational Data Base Management System (RDBMS) because it is based on relational model introduced by E.F. Codd.

How it works

Data is represented in terms of tuples (rows) in RDBMS.

Relational database is most commonly used database. It contains number of tables and each table has its own primary key.

Due to a collection of organized set of tables, data can be accessed easily in RDBMS.

Brief History of RDBMS

During 1970 to 1972, E.F. Codd published a paper to propose the use of relational database model.

RDBMS is originally based on that E.F. Codd's relational model invention.

What is table

The RDBMS database uses tables to store data. A table is a collection of related data entries and contains rows and columns to store data.

A table is the simplest example of data storage in RDBMS.

Let's see the example of student table.

ID	Name	AGE	CO
1	Ajeet	24	
2	aryan	20	C
3	Mahesh	21	

4	Ratan	22	
5	Vimal	26	

What is field

Field is a smaller entity of the table which contains specific information about every record in the table. In the above example, the field in the student table consist of id, name, age, course.

What is row or record

A row of a table is also called record. It contains the specific information of each individual entry in the table. It is a horizontal entity in the table. For example: The above table contains 5 records.

Let's see one record/row in the table.

1	Ajeet	24	B.T

What is column

A column is a vertical entity in the table which contains all information associated with a specific field in a table. For example: "name" is a column in the above table which contains all information about student's name.

Ajeet
Aryan
Mahesh
Ratan
Vimal

NULL Values

The NULL value of the table specifies that the field has been left blank during record creation. It is totally different from the value filled with zero or a field that contains space.

Data Integrity

There are the following categories of data integrity exist with each RDBMS:

Entity integrity: It specifies that there should be no duplicate rows in a table.

Domain integrity: It enforces valid entries for a given column by restricting the type, the format, or the range of values.

Referential integrity: It specifies that rows cannot be deleted, which are used by other records.

User-defined integrity: It enforces some specific business rules that are defined by users. These rules are different from entity, domain or referential integrity.