

# SQL PROGRAMMING LANGUAGE

## WHAT IS DATABASE?

A database is a collection of [information](#) that is organized so that it can easily be accessed, managed, and updated. **Databases** are basically containers for data.

For Example a public library stores books, we could also say that a library is a database of books. But strictly defined, databases are computer structures that save, organize, protect, and deliver data. A system that contains databases is called a **database management system**, or DBM.

This is used for creating and managing **databases**. The DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data.

## What is SQL?

SQL is a database computer language designed for the retrieval and management of data in relational database. SQL stands for Structured Query Language.

SQL is a language of database, it includes database creation, deletion, fetching rows and modifying rows etc. SQL is an ANSI (American National Standards Institute) standard .

SQL is the standard language for Relation Database System. All relational database management systems like MySQL, MS Access, Oracle, Sybase, Informix, postgres and SQL Server use SQL as standard database language.

## What is RDBMS?

RDBMS stands for **R**elational **D**atabase **M**anagement **S**ystem. RDBMS is the basis for SQL, and for all modern database systems like MS SQL Server, IBM DB2, Oracle, MySQL, and Microsoft Access.

## Why SQL?

- Allows users to access data in relational database management systems.
- Allows users to describe the data.
- Allows users to define the data in database and manipulate that data
- Allows users to create and drop databases and tables.
- Allows users to set permissions on tables, procedures, and views and also can be embed with other Language.

## SQL Commands:

DCL(Data Control language)

1. GRANT : Gives a privilege to user
2. REVOKE : Takes back privileges granted from user

DDL(Data Definition Language)

1. CREATE: Creates a new table, a view of a table, or other object in database.

2. ALTER : Modifies an existing database object, such as a table.
3. DROP : Deletes an entire table, other object in the database.

### DML(Data Manipulation Language)

1. SELECT: Retrieves certain records from one or more tables
2. INSERT: Creates a record
3. UPDATE : Modifies records
4. DELETE : Deletes record.

## TABLE

The data in RDBMs is stored in database object called TABLES. It is a collection of related data entries and it consists of columns and rows.

For example

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

## FIELD

Every table is broke up into smaller entities called fields.it is a column in a table.(eg: ID,NAME, ADDRESS, SALARY).

## RECORD (ROW)

It is an individual entry that exists in a table.it is horizontal entry in a table.

## COLUMN

A column is a vertical entity in a table that contains all information associated with a specific field in a table.