



# SQL Tutorial - TAE

SQL (Structured Query Language) performs operations on the records stored in the database, such as updating records, inserting records, deleting records, creating and modifying database tables, views, etc.

## SQL Tutorial

SQL tutorial provides basic and advanced concepts of SQL. Our SQL tutorial is designed for both beginners and professionals.

SQL (Structured Query Language) performs operations on the records stored in the database, such as updating records, inserting records, deleting records, creating and modifying database tables, views, etc.

SQL is not a database system, but it is a query language.

Suppose you want to perform the queries of SQL language on the stored data in the database.

You are required to install any database management system in your systems, for example, [Oracle](#), [MySQL](#), [MongoDB](#), [PostgreSQL](#), [SQL Server](#), [DB2](#), etc.



What is SQL?

SQL is a short form of the structured query language, and it is pronounced as S-Q-L or sometimes as See-Quell.

This database language is mainly designed for maintaining the data in relational database management systems. It is a special tool used by data professionals for handling structured data (data that is stored in the form of tables). It is also designed for stream processing in RDSMS.

You can easily create and manipulate the database, access and modify the table rows and columns, etc. This query language became the standard of ANSI in the year of 1986 and ISO in the year of 1987.

If you want to get a job in the field of data science, then it is the most important query language to learn. Big enterprises like Facebook, Instagram, and LinkedIn, use SQL for storing the data in the back-end.

## Why SQL?

Nowadays, SQL is widely used in data science and analytics. Following are the reasons which explain why it is widely used:

- The basic use of SQL for data professionals and SQL users is to insert, update, and delete the data from the relational database.
- SQL allows the data professionals and users to retrieve the data from the relational database management systems.
- It also helps them to describe the structured data.
- It allows SQL users to create, drop, and manipulate the database and its tables.
- It also helps in creating the view, stored procedure, and functions in the relational database.
- It allows you to define the data and modify that stored data in the relational database.
- It also allows SQL users to set the permissions or constraints on table columns, views, and stored procedures.

## History of SQL

"A Relational Model of Data for Large Shared Data Banks" was a paper which was published by the great computer scientist "E.F. Codd" in 1970.

The IBM researchers Raymond Boyce and Donald Chamberlin originally developed the SEQUEL (Structured English Query Language) after learning from the paper given by E.F. Codd. They both developed the SQL at the San Jose Research Laboratory of IBM Corporation in 1970.

At the end of the 1970s, Relational Software Inc. developed its own first SQL using the concepts of E.F. Codd, Raymond Boyce, and Donald Chamberlin. This SQL was based on RDBMS. Relational Software Inc., which is now known as Oracle Corporation, introduced the Oracle V2 in June 1979, which is the first implementation of SQL language. This Oracle V2 version operates on VAX computers.

## Process of SQL

When we are executing the command of SQL on any Relational database management system, then the system automatically finds the best routine to carry out our request, and the SQL engine determines how to interpret that particular command.

Structured Query Language contains the following four components in its process:

- Query Dispatcher
- Optimization Engines
- Classic Query Engine
- SQL Query Engine, etc.

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