Structured query language (SQL) is a domain-specific language used to program, design and administer relational-database-management systems.

The language is used by many types of users including software developers, database administrators, consultants implementing external software that must integrate with operational and financial business systems.

In this tech age there are even users in other functions of business like finance and procurement that prefer to interact directly with their data instead of opting to use a front end application. It can also be a powerful tool in the hands of an internal auditor.

Relational-database-management systems (RDBMS), also known as Relational Databases, are the industry standard data repositories used by most business systems, large and small, that must store day to day transactions generated under normal operating conditions. These types of database is also referred to as online transaction processing ,or OLTP.

These OLTP database are optimised to process many single or small batches of transaction, even when the database is distributed across multiple regions or even globally while always maintaining consistency of data.

The other general type of RDBMS is on-line analytical processing or OLAP database. This type of database is optimised to process vast amounts of transactions normally generated by an OLTP database, and OLTP is normally the source of an OLAP repository.

OLAP is mainly for generating information to support management decision making in all business functions and at all levels of management.

There are many variations of RDBMS, open-source and enterprise. Most notable enterprise RDBMS is Oracle database and Microsoft SQL server. PostgreSQL, MySQL and SQLite are most notable open-source RDBMS

SQL is a language that is based on relational algebra and tuple calculus. It consists of a subset of languages and are listed as follows:

Data Query Language (DQL)

Data Definition Language (DDL)

Data Manipulation Language (DML)

Data Transaction Language (DTL)

Data Control Language (DCL)

DQL is used for data retrieval used for display in application or in a database client. DDL is used to define the database and is used to implement database objects such as tables, columns, relationships and constraints. DML is used to create data initiated by business transactions as well as updating or deleting data, DML is also used to alter database objects such modifying tables or columns. DTL is used to control the way the database processes transactions and DCL is mostly related to users and access rights.

SQL can also be described as a declarative language (4GL) language and includes some elements of a procedural language.

<https://en.wikipedia.org/wiki/Domain-specific_language>

<https://en.wikipedia.org/wiki/Relational_algebra>

<https://en.wikipedia.org/wiki/Tuple_relational_calculus>

<https://en.wikipedia.org/wiki/Relational_database_management_system>

https://en.wikipedia.org/wiki/Online\_transaction\_processing

<https://en.wikipedia.org/wiki/Online_analytical_processing>

<https://en.wikipedia.org/wiki/Declarative_programming>

<https://en.wikipedia.org/wiki/Procedural_programming>