

# Data Base

## RDBMS

**MySQL** is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language.

**SQL** which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as **ADD**, **DROP**, **INSERT**, and **UPDATE** can be used with MySQL.

**PostgreSQL** known as **Postgres**, is a free and open- source relational database management system (RDBMS) emphasizing extensibility and SQL compliance. It was originally named POSTGRES, referring to its origins as a successor to the Ingres database developed at the University of California, Berkeley. In 1996, the project was renamed to PostgreSQL to reflect its support for SQL.

Commonly supported objects include views, stored procedures, indexes, triggers and object-defined data types, in addition to general RDBMS features such as primary keys, foreign key relationships and atomicity.

**Microsoft SQL Server** is a relational database management system developed by Microsoft. As a database server, it is a software product with the primary function of storing and retrieving data as requested by other software applications—which may run either on the same computer or on another computer across a network (including the Internet). Microsoft markets at least a dozen different editions of Microsoft SQL Server, aimed at different audiences and for workloads ranging from small single-machine applications to large Internet-facing applications with many concurrent users.

# Comparison between the three RDBMS

	SQL Server	MySQL	PostgreSQL	SQLite
SELECT ...	Select [col1], [col2]	SELECT col1, col2	SELECT col1, col2	SELECT col1, col2
Data from tables is case sensitive?	Yes WHERE name = 'John' Or WHERE name = 'john' are not the same	No WHERE name = 'John' Or WHERE name = 'john' are the same	Yes WHERE name = 'John' Or WHERE name = 'john' are not the same	Yes WHERE name = 'John' Or WHERE name = 'john' are not the same
Using quotation marks	name = 'John' only	name = 'John' or name = "John"	name = 'John' only	name = 'John' or name = "John"
Aliases for columns and tables	SELECT AVG(col1)=avg1	SELECT AVG(col1) AS avg1	SELECT AVG(col1) AS avg1	SELECT AVG(col1) AS avg1
Working with dates	GETDATE() DATEPART()	CURDATE() CURTIME() EXTRACT()	CURRENT_DATE() CURRENT_TIME() EXTRACT()	DATE('now') strftime()
Window functions i.e., OVER(), PARTITION BY()	Yes	Yes	Yes	No (need to use subqueries instead)