



# Introduction to SQL

# Structured Query Language

Standard programming language used for **managing** and **manipulating relational databases**.

- MySQL
- Postgress SQL
- SQL Server

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# MySQL Concept

1. **Data Definition Language (DDL):** Creating, modifying, and deleting database objects like tables, indexes, and views.
2. **Data Manipulation Language (DML):** Inserting, updating, deleting, and retrieving data from tables.
3. **Data Control Language (DCL):** Granting and revoking permissions for database users.
4. **Data Query Language (DQL):** Selecting and retrieving specific data from tables based on various criteria.

## DDL

- Creating tables: CREATE TABLE
- Altering tables: ALTER TABLE
- Dropping tables: DROP TABLE
- Creating indexes: CREATE INDEX
- Dropping indexes: DROP INDEX
- Creating views: CREATE VIEW
- Dropping views: DROP VIEW

## DML

- Inserting data: INSERT INTO
- Updating data: UPDATE
- Deleting data: DELETE

## DQL

- Selecting data: SELECT
- Joining tables: INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL OUTER JOIN
- Filtering data: WHERE
- Ordering data: ORDER BY
- Grouping data: GROUP BY
- Aggregating data: SUM, AVG, COUNT, MIN, MAX

## DCL

- Granting privileges: GRANT
- Revoking privileges: REVOKE
- Creating users: CREATE USER
- Dropping users: DROP USER
- Altering users: ALTER USER

## SQL queries run in this order

