**Aim: Introduction of SQL & installation steps of of My SQL**

# **Introduction to SQL:**

## SQL stands for Structured Query Language It's a programming language for storing and processing information in a relational database.**SQL was designed by Donald D. Chamberlin and Raymond F. Boyce.**

## SQL is the most common language for extracting and organizing data stored in relational databases. Relational databases store information in tabular form, with rows and columns representing different data attributes and the various relationships between the data values.

## An SQL query is processed by a query optimizer, which compiles in three phases: Parsing, Binding, and Optimisation. In the third step, all possible permutations and combinations are generated to find the most effective query execution plan in a reasonable time. The shorter the query takes, the better it is

## 

## SQL is used to communicate with a database. SQL statements are used to perform tasks such as:

## Update data on a database

## Retrieve data from a database

## Add, delete, and modify data stored within a relational database

## Databases that use SQL have data definition language (DDL), data query language (DQL), and data manipulation language (DML) functions

## **There are five different types of SQL commands:**

* **DDL:** Data Definition Language, used to build, change, and delete database structures
* **DQL:** Data Query Language
* **DML:** Data Manipulation Language
* **DCL:** Data Control Language
* **TCL:** Transaction Control Language

## **Here are some more SQL commands:**

## **UPDATE:** Updates data in a database

## **DELETE:** Deletes data from a database

## **CREATE DATABASE:** Creates a new database

## **ALTER DATABASE:** Modifies a database

## **CREATE TABLE:** Creates a new table

## **Data types used in SQL:**

## **Binary:** Used to store binary data in tables, such as photos, word documents, and text documents. Users can choose to store either fixed-length or variable-length bytes.

## **Numeric:** Used to store numbers in database columns. Numeric data types are generally grouped by:

## **Exact numeric types:** Values whose precision and scale should be preserved. These include INTEGER, BIGINT, DECIMAL, NUMERIC, NUMBER, and MONEY.

# **Installation steps of MYSQL For windows:**

### Go to the MySQL website and click MySQL Downloads

### Select MySQL Installer for Windows

### Choose the installer and click Download

### Install any required software, like Visual Code

### Accept the license

### Choose how you want to install

### Extract the install archive

### Create an option file

### Select a MySQL server type

### Initialize the data directory

### Start the server for the first time

### Start MySQL from the Windows Command Line

### Customize the PATH for MySQL Tools

### Create your first database using MySQL Workbench