

# MySQL Database

A MySQL workshop of one hour could cover various topics depending on the audience's familiarity with databases and MySQL specifically. :-

## 1. Introduction to MySQL (10 minutes):

- Overview of MySQL and its importance in the database ecosystem.
- Explanation of relational databases and SQL.

## 2. Basic SQL Queries (15 minutes):

- SELECT statement for retrieving data.
- INSERT, UPDATE, and DELETE statements for modifying data.
- WHERE clause for filtering data.

## 3. Database Design (10 minutes):

- Understanding tables, columns, and relationships.
- Creating tables with appropriate data types and constraints.

## 4. Data Manipulation (15 minutes):

- Using JOINS to combine data from multiple tables.
- Aggregation functions (COUNT, SUM, AVG, etc.) for data analysis.

## 5. Advanced Topics (10 minutes):

- Indexes for optimizing query performance.
- Stored procedures and functions for encapsulating logic.
- Triggers for automating actions based on database events.

## 6. Best Practices and Tips (5 minutes):

- Importance of backups and data integrity.
- Security considerations (user permissions, password management).

## 7. Hands-on Exercises (15 minutes):

- Participants work on simple SQL queries and database operations.
- Instructor provides guidance and assistance as needed.