



## MySQL Fundamentals

Oracle

- **Nível:**
  - **Duração:** 24h
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### Sobre o curso

**The MySQL Fundamentals training is the first step in mastering MySQL, the world's most popular open source database.**

Develop solid understanding and practical experience using relational databases, SQL and the MySQL Server and tools.

This course will teach you everything you need to know to start using the incredibly popular MySQL database in your Web, Cloud and embedded applications. In learning about MySQL you will also gain an understanding of relational databases in general, learning how to design your database so it's robust and efficient.

Furthermore, you will harness that power by learning SQL and using it to build databases, populate them with data and query that data through extensive hands-on practices.

**Upon completing this course, the learner will be able to meet these overall objectives:**

- Describe the features and benefits of MySQL
- Explain the basics of relational databases
- Design an effective database
- Issue MySQL statements from the mysql command-line client
- Perform database operations by using MySQL Workbench
- Select appropriate data types for your database
- Build a database and tables by using SQL
- Modify the structure of your database
- Create indexes and keys
- Add or update database data

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## Destinatários

- Architects
  - Database Administrators
  - Developers
  - End Users
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## Objetivos

Learn to:

- Explain the relational database model.
  - Describe the features and benefits of MySQL.
  - Install and configure the MySQL server and clients.
  - Design efficient databases.
  - Use Structured Query Language (SQL) to build your database and query data.
  - Employ appropriate MySQL tools.
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## Pré-requisitos

- Previous experience with any command-line program
  - Knowledge of database concepts
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## Programa

- Introduction to MySQL
- MySQL Server and Client
- Database Basics
- Designing Your Database
- Data Types
- Creating Databases and Tables
- Modifying Databases and Tables
- Querying Table Data
- Functions
- Joining Tables
- Conclusion

## **Introduction to MySQL**

- Course Goals
- Course Lesson Map
- Classroom Environment
- MySQL Overview
- What is MySQL Cloud ServiceWhat it means to provision a MySQL Cloud Service instance
- How an instance of MySQL Cloud Service differs from having an on-premises instance
- How MySQL course content covers material that applies whether you run MySQL locally or in MySQL Cloud Service

## **MySQL Server and Client**

- MySQL Client/Server Model
- MySQL Connectors
- Installation of the MySQL server
- Setting the root Password
- Starting and stopping the MySQL server
- Using the mysql client
- MySQL Workbench

## **Database Basics**

- Basics of Relational Databases
- Spreadsheet Versus Database
- Entities and Relationships
- Relationship Categories
- SQL Language and MySQL
- SQL data definition language
- SQL data manipulation language

## **Designing Your Database**

- Database Modeling
- Keys
- Normalization
- Database Design
- Viewing and Evaluating a Database

## **Data Types**

- Data Types as Part of Database Design
- Numeric Data Types

- Temporal Data Types
- String Data Types
- Character Set and Collation Support
- Data Type Considerations
- The Meaning of NULL

## **Creating Databases and Tables**

- Creating a Database
- Creating a Table
- Showing How a Table Was Created
- Column Options
- Table Options
- Indexes, Keys, and Constraints

## **Modifying Databases and Tables**

- Deleting databases and tables
- Creating a New Table Using an Existing Table
- Confirming the Creation of a New Table
- Copying an Existing Table Structure
- Creating a Temporary Table
- Adding, removing and modifying table columns
- Adding, removing and modifying Indexes

## **Querying Table Data**

- The SELECT Statement
- Creating Views
- Querying Data from an Application
- Exporting and Importing a Delimited File
- Troubleshooting: Authorization Levels

## **Modifying Table Data**

- Manipulating Data
- Inserting records
- Replacing existing records
- Updating existing records
- Deleting records
- Exporting and importing a script
- Multistatement Transactions

- Modifying Data from an Application

## **Functions**

- Functions in MySQL Expressions
- Using Functions
- String Functions
- Date and time functions
- Numeric Functions
- Aggregate Functions
- Spaces in Function Names

## **Joining Tables**

- Querying Multiple Tables
- Joining Tables with SELECT
- Inner Joins
- Outer Joins
- Table Name Aliases

## **Conclusion**

- Course Goals
- MySQL Curriculum Path
- MySQL Resources
- Evaluation
- Final Q&A