

MySQL 8.0 for Developers

Duration: 5 Days

Course Description:

The MySQL for Developers training course teaches developers you how to develop console and web applications using MySQL with your choice of the PHP, Java, or Python programming languages. Expert Oracle University instructors will guide you through realistic hands-on activities in which you will learn how to use Connectors to access MySQL databases, query the database effectively, present data in different formats, and how to use MySQL's support for JSON and spatial data.

Course Objectives:

Upon completion of this course, the student should be able to:

Create MySQL client programs in PHP, Java, and Python using Connectors, Use prepared statements to execute similar queries with different parameters, protect against SQL injection using prepared statements, Interpret and handle errors and warnings, Create database-driven web applications and work with views, Manipulate string data with functions and operators, Use temporal and numeric functions in expressions and Use transactions to group multiple SQL statements into an atomic operation.

Target Audience:

- Database Administrator
- Developer
- Web Administrator

Course Outlines:

Introduction to MySQL

- Course Overview Environment
- Course Environment

Connectors and API's

- Connectors and API's

Using Connectors

- Using Connectors
- Connection Pooling
- Connecting to the MySQL Server in a Web

Environment with PHP/PDO

- Connecting to the MySQL Server in a Web

Environment with Connector/J

- Connecting to the MySQL Server in a Web

Environment with Connector/Python

- Executing SQL in a Web Environment with PHP/PDO
- Executing SQL in a Web Environment with Connector/J
- Executing SQL in a Web Environment with Connector/Python

Prepared Statements

- Prepared Statements
- Preparing Statements in MySQL
- Using Prepared Statements with PHP/PDO
- Using Prepared Statements with Connector/J
- **Using Prepared Statements with Connector/Python**

Handling Errors and Warnings

- Handling Errors and Warnings
- Identifying Errors and Warnings with the mysql Command-Line Client
- Handling Errors and Warnings When Coding with PHP/PDO
- Handling Errors and Warnings When Coding with Connector/J
- Handling Errors and Warnings When Coding with Connector/Python

Creating Database-Driven Web Applications

- Creating Database-Driven Web Applications
- Web Forms
- Displaying Query Results in a Table Using PHP/PDO
- Displaying Query Results in a Table Using Java/JSP
- Displaying Query Results in a Table Using Python
- Paging Query Results Using PHP/PDO
- Paging Query Results Using Java/JSP
- Paging Query Results Using Python
- Enabling Sorting of Query Results Using PHP/PDO
- Enabling Sorting of Query Results Using Java/JSP
- Enabling Sorting of Query Results Using Python

Working with Views

- Working with Views
- Creating a View

- Updating a View
- Checking a View
- Obtaining View Metadata
- Creating, Updating, and Querying Multiple-table Views

Working with Strings

- Working with Strings
- Manipulating String Data with MySQL Expressions
- Matching Patterns in Strings
- Using Full-Text Searches

Working with Numeric and Temporal Data

- Working with Numeric and Temporal Data
- Using Numeric Data in SQL Expressions
- Using Temporal Data in SQL Expressions
- Using Control Flow Functions in SQL Expressions

Transactions

- Transactions
- Consistency Issues
- Transactions, Isolation Levels, and Locking
- Examining the Effect of Isolation Levels in Concurrent Transactions Using Transactional Statements with PHP/PDO
- Using Transactional Statements with Connector/J
- Using Transactional Statements with Connector/Python

Optimizing Queries

- Optimizing Queries
- Using EXPLAIN to Analyze Queries
- Optimization
- Managing Table Indexes
- Optimizing Queries Using Indexes
- Rewriting Queries for Optimization
- Identifying and Fixing Slow Queries with MySQL Enterprise Monitor Query Analyzer

Stored Routines

- Stored Routines
- Control Flow Statements
- Creating Simple Stored Routines
- Creating Stored Routines with Compound Statements
- Creating Stored Routines with Parameters
- Examining Stored Routines Metadata
- Deleting and Recreating a Stored Routine
- Creating Stored Routines with Control Flow Statements
- Working with Conditions and Handler in Stored Routines
- Working with Cursors in Stored Routines
- Creating a Functional Library

Triggers and Scheduled Events

- Triggers and Scheduled Events
- Using OLD and NEW Qualifiers
- Creating and Dropping Triggers
- Investigating Triggers in the sakila Database
- Creating a Scheduled Event

Reporting

- Reporting
- Materialized Views
- Aggregating Data
- Grouping Aggregated Data
- Using Window Functions
- Creating a Crosstab Report with a Bar Chart

Spatial Data

- Spatial Data
- Creating Spatial Data
- Using Spatial Indexes for Analysis

JSON Data

- JSON Data
- Creating and Querying JSON Data
- Updating JSON Data
- Indexing JSON Data

Document Store

- Document Store
- Using X DevAPI with Connector/J to Access a Document Store
- Accessing JSON in MySQL Shell
- Accessing JSON by Using X DevAPI with PHP
- Accessing JSON by Using X DevAPI with Connector/J
- Accessing JSON by Using X DevAPI with Connector/Python
- Accessing JSON by Using Python Statements in MySQL Shell

Conclusion

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REGISTER NOW!

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