**PROFESSIONAL TRAINING COURSE** 



# 5 Days Course on MySQL for Developers

# MJSQL®



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## **About the Course**

- Do you want to learn how to develop database applications on MySQL?
- Do you need to use MySQL Stored Procedures, Triggers, Views, and Information Schema?
- Do you want to create complex reports, use complex queries to retrieve data and aggregate results?
- Do you want to transfer your data from one server to another?

Then MySQL for Developers is for you! With an Authorized MySQL instructor and hands-on exercises you will learn how to develop applications with all the new features of MySQL 5.0. This instructor-led course is designed for students planning on developing applications that make use of MySQL 5.0. This course covers essential SQL statements for data design, querying, and programming. In addition, it will prepare students for the MySQL Developer certification.

### **Prerequisites**

Having attended the MySQL 5.0 for Beginners course or some experience with relational databases and SQL.

### **Course Settings**

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Venue/Date	Refer to Training Calendar	
Timings	0900-1700	
Inclusive	Certificates and notes	
Course Fee	Contact Us at sales@2-sigma.com	
Exam Fee	Contact Us at sales@2-sigma.com	
Audience	IT Officer, Web Developer and Programmer	
Level	Preparation towards Certification	

### **MySQL** Developers – Schedule

Day 1		
9.00am – 10.00am	Introduction	
	<ul> <li>MySQL Overview, Products and Services</li> </ul>	
	MySQL Enterprise Services	
	Supported Operating Services	
	MySQL Certification Program	
	Training Curriculum Paths	
	MySQL Website	
	<ul> <li>Installing MySQL and the World Database</li> </ul>	
10.00am – 10.30am	Breakfast	
10.30am – 1.00pm	MySQL Client/Server Concepts	
	MySQL General Architecture	
	How MySQL Uses Disk Space	
	How MySQL Uses Memory	
	MySQL Clients	
	<ul> <li>Invoking Client Programs</li> </ul>	
	Using Option Files	
	The MySQL Client	
	MySQL Query Browser	

	MySQL Connectors	
4.00	Third-Party APIs	
1.00pm – 2.00pm	Lunch	
2.00pm – 5.00pm	Querying for Table Data	
	The SELECT Statement	
	Aggregating Query Results	
	Using UNION	
	Handling Errors and Warnings     SQL Modes	
	Handling Missing or Invalid Data Values	
	<ul> <li>Interpreting Error Messages</li> <li>SQL Expressions</li> </ul>	
	SQL Comparisons	
	<ul> <li>Functions in SQL Expressions</li> <li>Comments in SQL Statements</li> </ul>	
	Day 2	
9.00am - 10.00am	Data Types	
9.00am - 10.00am	Data Type Overview	
	Numeric Data Types	
	Character String Data Types	
	<ul> <li>Binary String Data Types</li> </ul>	
	Temporal Data Types	
	NULLs	
10.00am – 10.30am	Breakfast	
10.30am – 1.00pm	Obtaining Metadata	
	Metadata Access Methods	
	The INFORMATION_SCHEMA Database/Schema	
	Using SHOW and DESCRIBE	
	The mysqlshow Command	
	Databases	
	Database Properties	
	Good Design Practices	
	Identifiers	
	Creating Databases	
	Altering Databases	
	Dropping Databases	
1.00pm – 2.00pm	Lunch	
2.00pm – 5.00pm	Tables	
	Creating Tables	
	Table Properties	
	Column Options	
	Creating Tables Based on Existing Tables	
	Altering Tables	
	Dropping Tables	
	Foreign Keys	
Day 3		
9.00am – 10.00am	Manipulating Table Data     The INSERT Statement	
	<ul> <li>The DELETE Statement</li> <li>The UPDATE Statement</li> </ul>	
	The REPLACE Statement	
	INSERT with ON DUPLICATE KEY UPDATE	

	The TRUNCATE TABLE Statement
10.00am – 10.30am	Breakfast
10.30am – 1.00pm	Transactions
	What is a Transaction?
	Transaction Commands
	Isolation Levels
	Locking
	Joins
	What is a Join?
	Joining Tables in SQL
	Basic Join Syntax
	Inner Joins
	Outer Joins
	Other Types of Joins
	Joins in UPDATE and DELETE statements
1.00pm – 2.00pm	Lunch
2.00pm – 5.00pm	Subqueries
	Types of Subqueries
	Table Subguery Operators
	Correlated and Non-Correlated Subqueries
	Converting Subqueries to Joins
	Views
	What Are Views?
	Creating Views
	Updatable Views
	Managing Views
	Obtaining View Metadata
	Day 4
9.00am – 10.00am	Prepared Statements
	Why Use Prepared Statements?
	<ul> <li>Using Prepared Statements from the mysql Client</li> </ul>
	Preparing a Statement
	<ul> <li>Executing a Prepared Statement</li> </ul>
	Deallocating a Prepared Statement
10.00am – 10.30am	Breakfast
10.30am – 1.00pm	Exporting and Importing Data
	<ul> <li>Exporting and Importing Data</li> </ul>
	<ul> <li>Exporting and Importing Data Using SQL</li> </ul>
	<ul> <li>Exporting and Importing Data Using MySQL Client Programs</li> </ul>
	<ul> <li>Import Data with the SOURCE Command</li> </ul>
1.00pm – 2.00pm	Lunch
2.00pm – 5.00pm	Stored Routines
	<ul> <li>What is a Stored Routine?</li> </ul>
	<ul> <li>Creating, Executing and Deleting Stored Routines</li> </ul>
	Compound Statements
	Assign Variables
	Parameter Declarations
	Flow Control Statements
	Declare and Use Handlers
	Cursors
9.00am – 10.00am	Day 5 Triggers

	<ul><li>What are Triggers?</li><li>Delete Triggers</li></ul>
	Restrictions on Triggers
10.00am – 10.30am	Breakfast
10.30am – 1.00pm	Storage Engines
	<ul> <li>SQL Parser and Storage Engine Tiers</li> </ul>
	<ul> <li>Storage Engines and MySQL</li> </ul>
	The MyISAM Storage Engine
	The InnoDB Storage Engine
	The MEMORY Storage Engine
	Other Storage Engines
1.00pm – 2.00pm	Lunch
2.00pm – 5.00pm	Optimization
	<ul> <li>Overview of Optimization Principles</li> </ul>
	<ul> <li>Using Indexes for Optimization</li> </ul>
	<ul> <li>Using EXPLAIN to Analyze Queries</li> </ul>
	Query Rewriting Techniques
	<ul> <li>Optimizing Queries by Limiting Output</li> </ul>
	Using Summary Tables
	Optimizing Updates
	Choosing Appropriate Storage Engines

### **More Information**

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To register, please email to <u>sales@2-sigma.com</u> or fax the registration form to 03-61880602, we will contact you for further action.