



## Introduction to MySQL

**Duration: 3 Days**    **Course Code: MYSI**    **Delivery Method: Company Event**

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### Overview:

The Introduction to MySQL course covers the basics of the SQL language as implemented by MySQL. The course is designed to give delegates practical experience in writing SQL statements using the MySQL client program and MySQL Workbench. The basic SQL statements, including the use of SQL functions and the basic table and view handling statements are introduced.

### Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

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### Target Audience:

Anyone who needs to access and work with a MySQL Database.

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### Objectives:

- To provide the skills needed to create and alter a MySQL database and query and modify data held within such a database.
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### Prerequisites:

There are no formal pre-requisites for the Introduction to MySQL course, although an understanding of databases and exposure to information technology in general would be useful. This knowledge can be gained by attendance on the Relational Databases & Data Modelling Overview course.

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### Follow-on-Courses:

- MySQL for Developers (MYSD)
  - MySQL Database Administration (MYSDBA)
  - PHP Programming & MySQL for Web Development (PHPPMWD)
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## Content:

### Introduction to MySQL Training Course Course Contents - DAY 1

#### Course Introduction

- Administration and course materials
- Course structure and agenda
- Delegate and trainer introductions

#### Session 1: DATABASE CONCEPTS

- What is a database?
- Database management systems
- Tables, rows and columns
- Indexes, primary keys, unique constraints and foreign keys
- Client-Server architecture
- Supported data types
- Storage engines and table types
- The Information\_Schema and MySQL Databases
- Exercise: Using a MySQL Database

#### Session 2: USING THE MySQL CLIENT

- What is the MySQL client?
- Getting started and Logging in
- Selecting a database
- Client commands
- Entering and executing SQL statements
- Retrieving previous commands
- Creating, editing and executing SQL files
- Redirecting output into a file
- Command line execution of MySQL Scripts
- Exercise: Using the MySQL Client

#### Session 3: BASIC SELECT

- The SQL SELECT statement
- Case sensitivity
- Quotes
- Statement terminator
- Syntax conventions
- The select clause
- The FROM clause
- Conditions and the WHERE clause
- Logical operators
- The ORDER BY clause
- Column aliases
- Arithmetic expressions
- Precedence of operators
- Exercises: Querying the sample database

#### Session 4: LIMIT, UNION AND AGGREGATE FUNCTIONS

- The LIMIT clause
- UNION
- UNION ALL
- Aggregate functions
- The GROUP BY clause
- Using Rollup with GROUP BY
- The HAVING clause
- Exercises: Using Limit, Union and Aggregate Functions  
Introduction to MySQL Training Course  
Course Contents - DAY 2

#### Session 5: SUBQUERIES AND JOINS

- Subqueries
- Cartesian products
- Joins with original syntax
- Table aliases
- Natural joins
- Join using
- Join on
- Multi-table joins
- Exercises: Using Subqueries and Joins

#### Session 6: NUMERIC AND CHARACTER FUNCTIONS

- Function types
- Testing functions
- Numeric functions
- Character functions
- Exercise: Using Numeric and Character Functions

#### Session 7: DATE, TIME AND OTHER FUNCTIONS

- Date and time column types
- Date and time formats
- The date format function
- Functions to return date time
- Functions to extract components from date time
- Date time arithmetic
- Miscellaneous functions
- Exercise: Using Date, Time and other functions  
Introduction to MySQL Training Course  
Course Contents - DAY 3

#### Session 8: DATABASES AND TABLES

- Creating a database
- Selecting a database
- Obtaining database metadata
- Table properties
- Creating tables
- Auto\_increment
- Show create table
- Column operations

#### Session 9: INDEXES AND VIEWS

- What is an index?
- Structure of an index
- Creating an index
- Reviewing indexes
- Composite indexes
- Altering a table to add an index
- Dropping indexes
- What is a view?
- Creating views
- View restrictions
- Dropping views
- Exercise: Maintaining indexes and views

#### Session 10: MANAGING DATA

- Inserting rows
- Replacing rows
- Updating rows
- Deleting rows
- The truncate statement
- The COMMIT and ROLLBACK commands
- Savepoints
- Implicit commits
- Exercise: Managing data

#### Session 11: ACCESS CONTROL

- Creating users
- Renaming users
- Dropping users
- Granting privileges
- Revoking privileges
- Exercise: Creating users, granting and revoking

#### Session 12: IMPORT AND EXPORT

- Exporting using SQL
- Importing using SQL
- Exporting from the command line
- Importing from the command line
- Exercise: Export and import data

- Constraint operations
- Copying tables
- Renaming tables
- Changing engine for tables
- Obtaining table metadata
- Altering tables
- Dropping tables
- Temporary tables
- Memory tables
- Exercises: Maintaining databases and tables

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### Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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