

Queries with MySQL

Audience Course Queries with MySQL

The course Queries with MySQL is designed for developers, database administrators and other interested parties who wish to learn and use MySQL SQL.

Prerequisites Course Queries with MySQL

This course has no specific requirements. General knowledge of system development and databases is beneficial to a good understanding.

Realization Training Queries with MySQL

The theory is treated on the basis of presentation slides. Demos are used to explain the theory. There is ample opportunity to practice. The course times are from 9.30 to 16.30.

Certification Queries with MySQL

Participants receive an official certificate Queries with MySQL after successful completion of the course.



Content Course Queries with MySQL

In the course Queries with MySQL participants learn the syntax and use of the query language SQL in the context of a MySQL database. SQL or Standard Query Language is an ANSI and ISO standard of which the basic syntax can be used in all relational database management systems (DBMS). There are however differences in the SQL implementations and this course focuses specifically on SQL in MySQL.

MySQL Intro

The course starts with an introduction of relational databases, the installation of MySQL and available tooling such as the MySQL Workbench. Also discussed are the different storage engines and the available connectors.

SQL Standard

Next the SQL Standard is discussed. Step by step the different parts of SQL such as Data Definition Language with CREATE TABLE, Data Manipulation Language with INSERT and UPDATE are treated.

Data Definition

Attention is then paid to the creation and manipulation of database tables with Primary Keys, Auto Increment, Indexes and Constraints on Columns. The relationship between tables with Foreign keys is also treated. And changing the table structure with ALTER TABLE and deleting tables with DROP is on the course program as well.

Data Manipulation

Next Data Manipulation with INSERT and UPDATE Queries is discussed. The course content also deals with passing parameters to queries by means of Prepared Statements.

Select and Grouping

Retrieving data with SELECT queries is a central part of the course program. The various clauses of SELECT such as FROM, WHERE, ORDER BY, BETWEEN, LIKE are covered. Also grouping data by means of GROUP and HAVING clauses is treated.

Functions

MySQL also has many functions that can be applied to perform calculations on data and to filter data. In addition to the standard SQL functions, the many MySQL specific functions are covered.

Join

Next the course program discusses how to combine data from different tables by means of joins. MySQL has many types of joins to combine data from tables and many of them are covered.

Advanced Topics

Finally attention is paid to the application of SET operators such as UNION and INTERSECT and the discussion of transactions with commits and rollbacks and stored procedures.

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Modules Course Queries with MySQL

Module 1 : MySQL Introduction	Module 2 : SQL Introduction	Module 3 : Data Definition
MySQL Database	SQL Foundations	CREATE TABLE
MySQL Installation	SQL Standard	Unique Constraint
MySQL versus MariaDB	Relationships	MySQL Sequences
MySQL Admin	Primary Keys	Column Attributes
Database View	Foreign Keys	Auto Increment Columns
MySQLWorkBench	SQL Query Types	AUTO_INCREMENT attribute
MySQL Storage Engines	DDL Queries	LAST_INSERT_ID()
mysql Prompt	DML Queries	NOT NULL Attribute
MySQL Notifier	MySQL Data Types	KEY and INDEX
Available Connectors	Numeric Data Types	ALTER TABLE
MySQL versions	String Data Types	DROP COLUMN
MySQL Documentation	Date and Time Types	DROP TABLE
Module 4 : Data Manipulation	Module 5 : SQL Queries	Module 6 : Grouping
Data Manipulation Language	Selecting Rows	GROUP BY Clause
Transaction Control	SELECT Statement	Filtering Groups
Inserting Rows	FROM Clause	Group by Single Column
INSERT Statement	Specifying Conditions	Group By More Columns
Prepared Statements	WHERE Clause	HAVING Clause
Updating Rows	Sorting with ORDER BY	Operators
UPDATE Statement	NULLS, FIRST, LAST	String Operators
Check Constraint	Removing Doubles	Date Operators
DELETE statement	BETWEEN and IN	Concatenate Operator
TRUNCATE TABLE	ANY Clause	MySQL IF Statement
Renaming Tables	ALL Clause	MySQL CASE Statement
Locking Tables	Using LIKE	IF versus CASE
Module 7 : Functions	Module 8 : Joins	Module 9 : Advanced Topics
MySQL Aggregate Functions	Joining Multiple Tables	Combining Results
AVG, COUNT, SUM	ANSI Join Syntax	SET Operatoren
MIN, MAX, GROUP_CONCAT	Normal Joins	MySQL UNION
STD Functions	Natural Join	UNION without Alias
STD, STDDEV, STDDEV_POP	Left Join	UNION ALL
MySQL String Functions	Right Join	INTERSECT
CONCAT, REPLACE, SUBSTRING	Full Join	Transaction Control
Control Flow Functions	Full Outer Join	Commit and Rollback
Date and Time Functions	Inner Join	Implicit rollbacks
Conversion Functions	ANSI Outer Join	Implicit commits
MySQL String Length	Cross Join	Stored Procedures
Cast Operation	Multiple Join Conditions	Passing Parameters

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