SQL Fundamentals

Audience Course SQL Fundamentals

The course **SQL Fundamentals** is aimed at a wide audience of system administrators, end users of Office applications and novice programmers who want to access relational **databases** efficiently by using queries in Structured Query Language (SQL).

Prerequisites Course SQL Fundamentals

To be able to participate in the course SQL Fundamentals some familiarity with database systems is beneficial for the understanding.

Realization Training SQL Fundamentals

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

Certification course SQL Fundamentals

Participants receive an official certificate SQL Fundamentals after successful completion of the course.

Duration: 2 days   **Price: € 1299**

Open Schedule

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Content Course SQL Fundamentals

In the course **SQL Fundamentals** the widely used and generic query language SQL is discussed. SQL is the abbreviation for Standard Query Language and is an ANSI and ISO standard that can be used in all relational database management systems (DBMS). With SQL you can retrieve data from databases as well as modify data in databases.

SQL Intro

The course SQL Fundamentals starts with a treatment of the SQL Standard. The structure of relational databases with tables and their relationships is covered. SQL can be used in many database systems such as Oracle, MySQL, Microsoft Access, Microsoft SQL Server, DB2, Informix, PostgreSQL and more. Almost every DBMS has also added its own extra functions to standard SQL.

Select Queries

Next attention is paid to practical skills to write SELECT queries. This also includes clauses such as WHERE, ORDER BY, GROUP BY, HAVING, LIKE and BETWEEN .. AND.

Data Types

Then it is time for the different data types used in the SQL language such as numeric, binary and string types. The data types related to dates and time are treated. And the SQL CREATE TABLE statement with which tables are created is discussed as well.
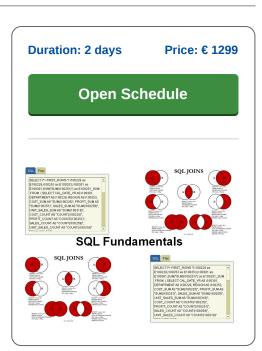
Functions

Part of the program of the course is also the treatment of various functions that are part of the SQL Standard. Among others mathematical, conversion and aggregation functions for calculating sum and average are covered.

Data Manipulation

Adding and adjusting data by means of INSERT and UPDATE statements is discussed next. And transactions that either become final with commit or are rolled back with rollback are treated.

Joins

Finally attention is paid to what foreign key relationships between tables are and how JOIN queries can be used to retrieve data from related tables.

Modules Course SQL Fundamentals

Module 1 : SQL Intro	Module 2 : Select Queries	Module 3 : SQL Data Definition
What is SQL?	Query Structure	CREATE Statements
History of SQL	SELECT .. FROM	Schema and Table Creation
SQL Standard	Options SELECT .. FROM	Data Types
SQL Parts	SELECT DISTINCT	Numeric Types
Environment	WHERE Clause	Binary Data Types
Relational Databases	Comparison Operators	String Data Types
Normalisation	Logical AND and OR	Temporal Data Types
Data Types	Aggregate Functions	Integrity Constraints
Database Creation	LIKE Condition	Keys
DDL Create Table	BETWEEN .. AND Condition	Not Null
Data Types	IN Condition	Foreign Keys
Language Elements	IS NULL Condition	Update and Delete
DML Insert Into	ORDER BY Clause	Check Constraint
SQL Errors	GROUP BY Clause	ALTER Table
Select Query	HAVING Clause	DROP Table
Module 4 : Functions	**Module 5 : Data Manipulation**	**Module 6 : Joins**
Standard Functions	Insert Statement	What are Joins?
Mathematical Functions	Update Statement	ANSI Join Syntax
String Functions	Updating Table Rows	Cross Join
Conversion Functions	Deleting Table Rows	Inner Join
Single Row Functions	Deleting and Foreign Keys	Table Aliases
Case Manipulation Functions	Transactions	Natural Join
Character Manipulation Characters	Commit and Rollback	Left Join
Numeric Functions	Implicit rollbacks	Right Join
Date Functions	Implicit commits	Full Join
General Functions	Explicit rollbacks	Full Outer Join
Multiple Row Functions	Explicit commits	Left Excluding Join
Aggregate Functions	Savepoints	Right Excluding Join
Formatting Numbers	Subqueries	Outer Excluding Join