SQL Fundamentals

Duration: 1 day Live online

Course Overview

Expleo Academy's one-day practical workshop provides a good understanding of basic SQL techniques. The SQL taught will enable the design of database queries on any database management system. This will support a deeper understanding of information systems used for business purposes.

The course is delivered by SQL practitioners, who can share their knowledge and experience of using the taught techniques.

The collaborative training approach provides access to a data model and a training database with which you can practice constructing SQL commands.

Expleo Academy also uses a cloud based platform solution to provide a stable and rich environment to facilitate instructor demos and practical exercises for attendees.

Who should attend?

Anyone wishing to gain knowledge of Structured Query Language, as well as those wishing to brush up on their SQL skills. This includes End Users of business systems, Business Analysts, Test Analysts, Test Managers, Software Engineers, and anyone who might want to query data from a database management system. The course is equally applicable as an introduction to SQL and a refresher for those with previous knowledge.

Prerequisites & pre-reading guidelines

There are no specific prerequisites for this training. The content is equally applicable to those who have no experience with SQL as to those who have had experience with SQL and require practical guidance to refresh their competency in this topic.

How certification is earned

Upon completion of this training event, attendees will receive an Expleo certificate. Attendees will also receive worked examples of SQL queries, a Data Model, an SQL Quick Reference glossary, and an SQLite command guide.

Course Objectives

On completion of this course, attendees will be able to:

- Recognise different types of commonly used databases
- Recognise common approaches to modelling data requirements
- Understand the basic structure of a relational database
- Design a basic select statement
- Retrieve specific data with clauses and operators
- Use basic calculations and Functions
- Collate retrieved data with clauses
- Use Joins to retrieve data from different tables in one select statement

Context

Expleo Academy's interactive training of SQL Fundamentals enables you to construct database queries. This can be a key competency for any business or project stakeholder working with information systems. This course is a step in the Learning Pathway for today's Business Analyst and Software Quality Analyst.

Related courses

Refer to Expleo Academy's Business Analysis, Software Quality Analysis, and Software Engineering Learning Pathways for additional training options.

Expleo Academy is happy to discuss your specific training needs to advise on your optimal learning pathway.

Course Outline

Introduction

- What is SQL?
- Types of databases
- Types of data models
- Keys
- Common Data Types
- Example of a relational data model

Normalisation And Database Design

- Issues with Database design
- Normalization in database design
- Creating a Database Schema

The SELECT Statement

- The SELECT statement
- Querying data from columns and tables
- Ordering retrieved data
- Retrieving unique data using DISTINCT statements
- Retrieving specific rows using the WHERE clause
- The use of Operators with WHERE clauses
- Performing calculations on retrieved data
- Using aliases
- Commonly used functions
- Collating retrieved data with the GROUP BY clause
- Filtering retrieved data with the HAVING clause
- Nested SELECT statements
- Practice and guidance on database queries using SELECT statements, clauses, operators, calculations, functions, and aliases

Joins

- Querying data from multiple tables using Basic Joins
- Cross Joins
- Equi-Joins
- Resolving ambiguous field names
- Table name aliases
- Inner Joins
- Left Outer Joins
- Right Outer Joins
- Full Outer Joins
- Using NULL values
- Nested Joins
- Nested Selects
- Practice and guidance on database queries using Joins

Real World Examples

- Microsoft Query
- Microsoft Excel
- Microsoft SQL Server
- Keys

Contact

Patricia McGuire
Head of Training
Expleo Technology Ireland Ltd
M. +353 (0)87 235 5902
W. expleoacademy.com
pat.mcguire@expleogroup.com
academy-uki@expleogroup.com

expleoacademy.com

(expleo)
academy