



Writing SQL Queries

Target Audience

This course is designed to allow delegates to write queries using TSQL looking at common query problems and avoiding coding pitfalls

Delegate Pre-Requisites

Experience gained on the SQL Server Introduction course or equivalent, including a basic understanding of databases and an awareness of SQL Servers Management studio is required.

Course Duration

This is a Two Day Course

Course Details

Courses commence at 9:30 a.m. through to 4:30 p.m.

A laptop computer is provided for each delegate attending on this packed programme to try out the tips and techniques demonstrated

All delegates will receive comprehensive Training Courseware to refer to during the course, together with a Course Attendance Certificate

Schedule Courses

Off-site scheduled courses are available at a location near you - this course is available on our current programme - call our team for more details

Corporate Courses

On-site Corporate courses are available - you provide the Conference Room ... we bring everything else!

Modular Courses

Bite-sized 'modular' courses are available where you can build your own day course covering the topics that suit you - these are half day modules that you can mix and max



The Content

Introduction and Overview

- * SQL Fundamentals
- * Retrieving data with SELECT
- * Expressions
- * Literals
- * Handling NULLs properly
- * Executing Queries
- * Analysing query plans
- * Enhancing query performance
- * Selecting the best alternatives
- * Avoiding errors and pitfalls

Querying Multiple Tables

- * Implementing various types of joins
- * Inner joins
- * Cross joins
- * Left, right and full outer joins
- * Equijoins vs. theta joins
- * Adding filter conditions to outer joins
- * Writing self-joins
- * Joining a table to itself
- * Chaining self-joins
- * Solving time-interval problems
- * Combining queries with set operators
- * UNION, UNION ALL, INTERSECT, EXCEPT

Scalar and Aggregate Functions

- * Converting data types
- * Performing calculations on dates and times
- * Extracting date and time components
- * Manipulating strings
- * Choosing the right function for the job
- * Summarising data with aggregate functions
- * COUNT, SUM, AVG, MIN, MAX
- * Managing NULLs
- * Suppressing duplicates
- * Grouping data - GROUP BY & GROUP BY ALL
- * Applying conditions with HAVING
- * Extending group queries
- * Nested grouped aggregates
- * Joins and grouping
- * Building crosstab reports

- * Using CASE to turn rows into columns
- * Applying PIVOT

Performing Analysis with Analytic Functions

- * The OVER clause
- * Specifying the ordering before applying the function
- * Splitting the result set into logical partitions
- * Calculating ranks
- * RANK and DENSE_RANK
- * ROW_NUMBER with ordered sets
- * Extending the use of aggregates
- * Partitioning in multiple levels
- * Comparing rows and aggregate values

Building Subqueries

- * Simple subqueries
- * Subqueries in conditions and column expressions
- * Creating multilevel subqueries
- * Avoiding problems with subqueries return NULLS
- * Correlated subqueries
- * Accessing values from the outer query
- * Avoiding accidental correlation
- * Common table expressions
- * Reusable and recursive subqueries
- * Traversing hierarchies

Breaking Down Complex Queries

- * Overcoming SQL limitations
- * Reducing complexity and improving performance
- * Exploring alternatives for decomposing: temporary tables, views, common table expressions

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