



Advanced Query Writing Essentials

This course will provide participants with a good exposure to advanced Transact-SQL querying writing techniques allowing participants to develop more complex and robust SQL queries, like writing advanced reports against a SQL Server database, and for developers who will need to build applications with a SQL Server backend.

Regardless of the version of SQL Server participants are using, throughout the day participants will undertake a series of practical exercises learning the difference between and where to use an INNER and an OUTER JOIN, when to use a LEFT vs a RIGHT JOIN, and explore the 'how and why' of subqueries while discovering T-SQL programming best practices.

Who Should Attend:

The course is designed for power users namely, report writers, business analysts and client application developers and report writers who are already comfortable writing queries with basic SQL syntax.

Course Prerequisites:

Before attending this course, participants should have:

- Experience navigating the Microsoft Windows environment
- Working knowledge of relational databases.
- Ideally will have attended the WARDY IT Solutions SQL Server Query Writing Essentials course
- Practical experience of writing SQL queries

Course Objectives:

After completing this course, participants will be able to:

- Understand the order that you must use and write SQL clauses to simplify your task.
- Query multiple tables with inner joins, outer joins and self-joins
- Write queries that retrieve and modify data by using subqueries
- Use various techniques when working with complex queries including the use of temporary objects
- Write queries that use advanced SQL functions and operators
- Work with the special datatypes provided by SQL Server
- Build queries with transactional control and sophisticated error handling
- Understand when and where to use cursors for row based operations
- Construct and use various programmatic objects in a SQL database

Course Code: SSAQWE
Course Duration: 1 Day

Course Summary

Module 1: Complex Joins

Module 2: Subqueries and Temporary Tables

Module 3: Complex Queries

Module 4: Working with Special Datatypes

Module 5: Transactions

Module 6: Using Cursors

Module 7: Introduction to Programming Objects

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Call 1300 927 394 to register for this course today as places are strictly limited.



Course Outline

Module 1: Complex Joins

Lesson 1

- Review of the basics
- INNER JOINS
- OUTER JOINS
- CROSS JOINS

Lesson 2

- Multi-table queries
- Compound Joins
- Join to Subqueries
- Join to Table Valued Functions

Module 1: Lab

Module 2: Subqueries and Temporary Tables

Lesson 1

- Subquery basics
- Correlated Subqueries

Lesson 2

- Table Types
- Temporary tables
- Common Table Expressions (CTE)

Module 2: Lab

Module 3: Complex Queries

Lesson 1

- Paging Data
- Using the MERGE statement
- The OUTPUT clause
- Pivot and UnPivot
- Removing duplicate rows

Lesson 2

- Custom Aggregations
- Grouping Sets
- The Rollup Operator
- The Cube Operator

Module 3: Lab

Module 4: Working with Special Datatypes

Lesson 1

- Date and Time Datatypes
- Date and Time Functions

Lesson 2

- Hierarchy Datatype
- Spatial Datatypes

Module 4: Lab

Module 5: Transactions

Lesson 1

- Implicit Transactions
- Explicit Transactions
- Distributed Transactions

Lesson 2

- Controlling Transaction behaviour

Module 5: Lab

Module 6: Using Cursors

Lesson 1

- Set vs Row Operations
- Cursor syntax

Module 6: Lab

Module 7: Introduction to Programming Objects

Lesson 1

- Stored Procedures
- Functions

Lesson 2

- Error Handling Techniques
- Passing Parameters

Module 7: Lab