

KOENIG SOLUTIONS · COURSE OUTLINE

Querying Microsoft SQL Server with Transact-SQL

Learn to write and manage Transact-SQL queries, from SELECT statements and joins to subqueries, functions and stored procedures.

5 Days

40 HOURS

13

MODULES

44

TOPICS

COURSE OVERVIEW

The “Querying Microsoft SQL Server with Transact-SQL” course is designed to introduce learners to the essentials of Querying and modifying data in Microsoft SQL Server using Transact-SQL (T-SQL). This course covers a broad range of topics, starting with the basics of T-SQL syntax and progressing through Complex querying techniques, Data types, and Functions. Learners will gain proficiency in crafting queries using `SELECT`, Filtering data with `WHERE`, and Sorting results. They will explore the intricacies of Joining tables, Implementing subqueries, Aggregating data, and utilizing window Functions. The course also dives into Data manipulation with `INSERT`, `UPDATE`, and `DELETE` statements, as well as the use of SQL Server Functions. Further, participants will study advanced topics like Error handling, Transactions, and the use of Programming constructs in T-SQL. SQL Server Transact-SQL training is comprehensive, equipping learners with the skills to write efficient and powerful database queries. By the end of the course, students will possess the knowledge necessary for effective Transact-SQL training and be able to apply T-SQL techniques to real-world database management scenarios.

WHO THIS COURSE IS FOR

The Querying Microsoft SQL Server with Transact-SQL course is designed for IT professionals seeking to master T-SQL for SQL Server.

Database Administrators

Database Developers

Business Intelligence Professionals

Data Analysts

SQL Server Report Writers

IT Professionals seeking to enhance their SQL querying skills

System Engineers who manage and maintain SQL Server databases

Aspiring SQL Server Data Professionals

Technical Consultants who provide database solutions

Students studying database management or computer science related courses

What You Will Learn

- Write SELECT statements with filtering and sorting
- Apply joins including inner, outer, self and cross joins
- Implement SQL Server data types such as string and temporal
- Insert, update and delete records in SQL Server
- Use SQL Server functions to convert and evaluate data
- Aggregate and group data with filtering conditions
- Implement subqueries, table expressions and set operators
- Create window functions, PIVOT queries and stored procedures

COURSE SYLLABUS

13 Modules, 44 Topics

01

Introduction to Transact-SQL

TOPICS

What is Transact-SQL · The SELECT statement · The WHERE clause · Sorting results · Calculations · CASE expressions

02

Joining Tables with Transact-SQL

TOPICS

The JOIN clause · Inner joins · Outer joins · Self-joins and cross joins

03

Filtering and Sorting Results

TOPICS

Implement the ORDER BY clause · Filter data with the WHERE clause · Limit the number of rows returned by a query · Implement NULL logic

04

SQL Server Data Types

TOPICS

Understand data types · Implement string data types · Implement temporal data types

05

Inserting, Updating and Deleting Data

TOPICS

Insert new records · Update existing records · Delete data

06

Using SQL Server Functions with Transact-SQL

TOPICS

Understand function types in SQL Server · Convert data using functions · Implement logical functions · Work with NULL data using functions

07

Aggregating Data with Transact-SQL

TOPICS

Implement aggregation in SQL Server · Group records in SQL Server · Filter aggregated data

08

Implement Subqueries with Transact-SQL

TOPICS

Implement scalar and multi-valued sub-queries · Implement correlated subqueries · Implement existence checks with subqueries

09

Create Queries That Use Table Expressions

TOPICS

Create views · Create table-valued functions · Implement derived tables · Implement common table expressions

10

Use UNION, INTERSECT, EXCEPT and APPLY on Multiple Sets of Data

TOPICS

- Write queries with the UNION operator
- Write queries with the INTERSECT and EXCEPT operators
- Write queries with the APPLY operator

11

Implement Window Functions in Queries

TOPICS

Understand window functions · Implement window functions

12

Use PIVOT and Grouping Sets in Queries

TOPICS

Implement PIVOT in queries · Implement grouping sets in queries

13

Use Stored Procedures in Queries

TOPICS

- Query data with stored procedures
- Interact with stored procedures using input and output parameters
- Write simple stored procedures

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com

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