

Writing Queries Using Microsoft SQL Server 2008 Transact-SQL

Duration: 3 days

Course Description: This course teaches students the skills required to write basic Transact-SQL queries for Microsoft SQL Server 2008

Audience: SQL Server database administrators, implementers, system engineers, and developers who are responsible for writing queries will benefit from this course.

Prerequisites: Students should have Knowledge of data integrity concepts, core Windows Server skills, relational database design skills, and programming skills.

Topics:

MODULE 1: GETTING STARTED WITH DATABASES AND TRANSACT-SQL IN SQL SERVER 2008

- Overview of SQL Server 2008
- Overview of SQL Server Databases
- Overview and Syntax Elements of T-SQL
- Working with T-SQL Scripts
- Using T-SQL Querying Tools

Lab: Using SQL Server Management Studio and SQLCMD

- Exploring the Components and Executing Queries in SQL Server Management Studio
- Starting and Using SQLCMD
- Generating a Report from a SQL Server Database Using Microsoft Office Excel

MODULE 2: QUERYING AND FILTERING DATA

- Using the SELECT Statement
- Filtering Data
- Working with NULL Values
- Formatting Result Sets
- Performance Considerations for Writing Queries

Lab: Querying and Filtering Data

- Retrieving Data by Using the SELECT Statement
- Filtering Data by Using Different Search Conditions
- Using Functions to Work with NULL Values

- Formatting Result Set

MODULE 3: GROUPING AND SUMMARIZING DATA

- Summarizing Data by Using Aggregate Functions
- Summarizing Grouped Data
- Ranking Grouped Data
- Creating Crosstab Queries

Lab: Grouping and Summarizing Data

- Summarizing Data by Using Aggregate Functions
- Summarizing Grouped Data
- Ranking Grouped Data
- Creating Crosstab Queries

MODULE 4: JOINING DATA FROM MULTIPLE TABLES

- Querying Multiple Tables by Using Joins
- Applying Joins for Typical Reporting Needs
- Combining and Limiting Result Set

Lab: Joining Data from Multiple Tables

- Querying Multiple Tables by Using Joins
- Applying Joins for Typical Reporting Needs
- Combining and Limiting Result Sets

MODULE 5: WORKING WITH SUBQUERIES

- Writing Basic Subqueries
- Writing Correlated Subqueries

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- Comparing Subqueries with Joins and Temporary Tables
- Using Common Table Expressions

Lab: Working with Subqueries

- Writing Basic Subqueries
- Writing Correlated Subqueries
- Comparing Subqueries with Joins and Temporary Tables
- Using Common Table Expressions

MODULE 6: MODIFYING DATA IN TABLES

- Inserting Data into Tables
- Deleting Data from Tables
- Updating Data in Tables
- Overview of Transactions

Lab: Modifying Data in Tables

- Inserting Data into Tables
- Deleting Data from Tables
- Updating Data in Tables
- Working with Transactions

MODULE 7: QUERYING METADATA, XML, AND FULL-TEXT INDEXES

- Querying Metadata
- Overview of XML
- Querying XML Data
- Overview of Full-Text Indexes
- Querying Full-Text Indexes

Lab: Querying Metadata, XML, and Full-Text Indexes

- Querying Metadata
- Querying XML Data
- Creating and Querying Full-Text Indexes

MODULE 8: USING PROGRAMMING OBJECTS FOR DATA RETRIEVAL

- Overview of Views
- Overview of User-Defined Functions
- Overview of Stored Procedures
- Overview of Triggers
- Writing Distributed Queries

Lab: Using Programming Objects for Data Retrieval

- Creating Views
- Creating User-Defined Functions
- Creating Stored Procedures
- Writing Distributed Queries

MODULE 9: USING ADVANCED QUERYING TECHNIQUES

- Considerations for Querying Data
- Working with Data Types
- Cursors and Set-Based Queries
- Dynamic SQL
- Maintaining Query Files

Lab: Using Advanced Querying Techniques

- Using Execution Plans
- Converting Data Types
- Implementing a Hierarchy
- Using Cursors and Set-Based Queries