Writing Queries Using Microsoft SQL Server 2005 T-SQL

Course Summary

Description

In this course, students will learn how to build basic queries using Transact-SQL, the language of SQL Server. They will also learn how to build effective views, stored procedures, triggers, and user-defined functions, using Transact-SQL. Students will learn about the new enhancements to the Transact-SQL programming language including improved support for error handling and hierarchical queries, and programmers can now use .NET languages like C# and Visual Basic to build database objects.

Topics

- A Tour of SQL Server 2005
- Designing and Creating a Database
- Data Selection Queries
- Modifying Data
- Working with SQL Server Management Studio
- Transact-SQL Programming
- Creating Views
- Creating Stored Procedures and Triggers
- Creating User-Defined Functions
- Using .NET Code in SQL Server 2005
- Advanced Query Techniques

Audience

This course is designed for database developers and SQL Server administrators who need to understand Transact-SQL. To get the most out of this course, you should have a solid understanding of relational databases. No particular programming experience is required, but the course is taught from a developer's perspective.

Prerequisites

To get the most out of this course, students should have a solid understanding of relational databases. No particular programming experience is required, but the course is taught from a developer's perspective.

Duration

Three days

II.

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Course Outline

I. A Tour of SQL Server 2005
A. SQL Server 2005 Editions, Components, and Tools
B. Using SQL Server Management Studio (SSMS)
C. Working with Tables and Queries
D. New Transact-SQL Features
E. Business Intelligence Services

II. Designing and Creating a Database
A. Relational Database Design Principles
B. Implementing the Design

III. Data Selection Queries
A. Understanding Transact-SQL
B. The SELECT Statement
C. The WHERE Clause
D. Using ORDER BY to Sort Data
E. The GROUP BY Clause
F. Joining Tables

IV. Modifying Data
A. Modifying Data
B. Inserting Data
C. Updating Data
D. Deleting Data
E. Understanding Transaction Isolation

V. Working with SQL Server Management Studio
A. Getting Started with SSMS
B. Exploring the Object Explorer
C. Working with the Query Editor
D. Using SQL Server Books Online

VI. Transact-SQL Programming
A. Overview of Transact-SQL
B. Using Built-In Functions
C. Controlling Flow
D. Ranking Results
E. Transactions and Error Handling
F. Transaction Concepts
G. Applications and Transactions
H. Creating Explicit Transactions
I. Using TRY/CATCH Error Handling

VII. Creating Views
A. What Is a View?
B. Creating Views
C. Updating Data Using a View
D. Using Computed Columns
E. Indexed Views
F. Partitioned Views

VIII. Creating Stored Procedures and Triggers
A. Creating Stored Procedures
B. Creating Triggers

X. Creating User-Defined Functions
A. User-Defined Function Overview
B. Scalar Functions
C. Inline Table-Valued Functions
D. Multi-Statement Table-Valued Functions
E. Using Functions, Views, and Stored Procedures

XI. Using .NET Code in SQL Server 2005
A. Writing SQLCLR Code
B. SQLCLR Code Modules
C. Managing Code Modules
D. SQLCLR Security
E. T-SQL vs. .NET Code

XII. Advanced Query Techniques
A. Full-Text Search
B. Generating XML with FOR XML
C. Using APPLY
D. Creating Recursive Queries
E. Creating Pivot Queries
F. Executing Dynamic SQL