

(20461D) – Administering the Web Server (IIS) Role of Windows Server

OBJECTIVE

This 3-day instructor led course provides students with the technical skills required to write basic Transact-SQL queries for Microsoft SQL Server 2014. This course is the foundation for all SQL Server-related disciplines; namely, Database Administration, Database Development and Business Intelligence. The main purpose of the course is to prepare people for the exam "70-461: Writing Queries Using Microsoft® SQL Server® 2014 Transact-SQL." This exam will be the underlying exam for all SQL Server-related disciplines; namely, Database Administration, Database Development and Business Intelligence. As such, the primary target audience for this course is: Database Administrators, Database Developers and BI professionals.

Note: This course is designed for customers who are interested in learning SQL Server 2012 or SQL Server 2014. It covers the new features in SQL Server 2014, but also the important capabilities across the SQL Server data platform.

COURSE TOPICS

Module 1: Introduction to Microsoft SQL Server 2014

- The Basic Architecture of SQL Server
- SQL Server Editions and Versions
- Getting Started with SQL Server Management Studio

Module 2: Introduction to T-SQL Querying

- Introducing T-SQL
- Understanding Sets
- Understanding Predicate Logic
- Understanding the Logical Order of Operations in SELECT statement

Module 3: Writing SELECT Queries

- Writing Simple SELECT Statements
- Eliminate Duplicates with DISTINCT
- Using Column and Table Aliases
- Write Simple CASE Expressions

Module 4: Querying Multiple Tables

- Understanding Joins
- Querying with Inner Joins
- Querying with Outer Joins
- Querying with Cross Joins and Self Joins

Module 5: Sorting and Filtering Data

- Sorting Data
- Filtering Data with Predicates
- Filtering with the TOP and OFFSET-FETCH
- Working with Unknown Values

Module 6: Working with SQL Server 2014 Data Types

- Introducing SQL Server 2014 Data Types
- Working with Character Data
- Working with Date and Time Data

Module 7: Using DML to Modify Data

- Inserting Data
- Modifying and Deleting Data

Module 8: Using Built-In Functions

- Writing Queries with Built-In Functions
- Using Conversion Functions
- Using Logical Functions
- Using Functions to Work with NULL

Module 9: Grouping and Aggregating Data

- Using Aggregate Functions
- Using the GROUP BY Clause
- Filtering Groups with HAVING

Module 10: Using Subqueries

- Writing Self-Contained Subqueries
- Writing Correlated Subqueries
- Using the EXISTS Predicate with Subqueries

Module 11: Using Table Expressions

- Using Views
- Using Inline Table-Valued Functions
- Using Derived Tables
- Using Common Table Expressions

Module 12: Using Set Operators

- Writing Queries with the UNION Operator
- Using EXCEPT and INTERSECT
- Using APPLY

Module 13: Using Window Ranking, Offset, and Aggregate Functions

- Creating Windows with OVER
- Exploring Window Functions

Module 14: Pivoting and Grouping Sets

- Writing Queries with PIVOT and UNPIVOT
- Working with Grouping Sets

Module 15: Querying data with Stored Procedures

- Writing Queries with PIVOT and UNPIVOT
- Passing Parameters to Stored Procedures
- Creating Simple Stored Procedures
- Working with Dynamic SQL

Module 16: Programming with T-SQL

- T-SQL Programming Elements
- Controlling Program Flow

Module 17: Implementing Error Handling

- Using TRY / CATCH Blocks
- Working with Error Information

Module 18: Implementing Transactions

- Transactions and the Database Engine
- Controlling Transactions

Module 19: Appendix 1: Improving Query Performance

- Factors in Query Performance
- Displaying Query Performance Data

Module 20: Appendix 2: Querying SQL Server Metadata

- Querying System Catalog Views and Functions
- Executing System Stored Procedures

- Querying Dynamic Management Objects

PREREQUISITES

This course requires that you meet the following prerequisites:

- Working knowledge of relational databases.
- Basic knowledge of the Microsoft Windows operating system and its core functionality.

TRAINING APPROACH

This course includes lectures, course notes, exercises and hands-on practice.

COURSE DURATION

24 Hours (in 3 days)

Time: 9:00am to 6:00pm

Lunch Time: 1:00pm to 2:00pm

CERTIFICATION COMPLETION

A certificate of completion is provided for all trainees attending the course