

20461: Querying Microsoft SQL Server 2014

Course Details

Course Outline

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
- Lab : Working with SQL Server 2014 Tools

2. Introduction to T-SQL Querying

- Introducing T-SQL
- Understanding Sets
- Understanding Predicate Logic
- Understanding the Logical Order of Operations in SELECT statements
- Lab : Introduction to Transact-SQL Querying

3. Writing SELECT Queries

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

4. Querying Multiple Tables

- Understanding Joins
- Querying with Inner Joins
- Querying with Outer Joins
- Querying with Cross Joins and Self Joins
- Lab : Querying Multiple Tables

5. Sorting and Filtering Data

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

6. Working with SQL Server 2014 Data Types

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

7. Using DML to Modify Data

- Inserting Data
- Modifying and Deleting Data
- Lab : Using DML to Modify Data

8. Using Built-In Functions

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

9. Grouping and Aggregating Data

- Using Aggregate Functions
- Using the GROUP BY Clause
- Filtering Groups with HAVING
- Lab : Grouping and Aggregating Data

10. Using Subqueries

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

11. Module 11: Using Table Expressions

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

12. Using Set Operators

- Writing Queries with the UNION Operator
- Using EXCEPT and INTERSECT
- Using APPLY
- Lab : Using Set Operators

13. Using Window Ranking, Offset, and Aggregate Functions

- Creating Windows with OVER
- Exploring Window Functions
- Lab : Using Window Ranking, Offset and Aggregate Functions

14. Pivoting and Grouping Sets

- Writing Queries with PIVOT and UNPIVOT
- Working with Grouping Sets
- Lab : Pivoting and Grouping Sets

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
- Lab : Executing Stored Procedures

16. Programming with T-SQL

- T-SQL Programming Elements
- Controlling Program Flow
- Lab : Programming with T-SQL

17. Implementing Error Handling

- Using TRY / CATCH Blocks
- Working with Error Information
- Lab : Implementing Error Handling

18. Implementing Transactions

- Transactions and the Database Engine
- Controlling Transactions
- Lab : Implementing Transactions