MOC20461
Querying Microsoft SQL Server 2014
Durata: 4.5 gg

Descrizione
Questo corso di 5 giorni fornisce agli studenti le competenze tecniche necessarie per scrivere query di base Transact-SQL per Microsoft SQL Server 2014. Questo corso è la base di tutte le discipline di SQL Server; Amministrazione di database, sviluppo di database e di Business Intelligence. Questo corso aiuta le persone a prepararsi per l'esame 70-461.

Obiettivi
Al termine del corso gli allievi saranno in grado di:
• Scrivere SELECT query
• Tabelle query multiple
• Ordinare e filtrare i dati
• Descrivere l'utilizzo di tipi di dati in SQL Server
• Modificare i dati utilizzando Transact-SQL
• Utilizzare funzioni built-in
• Gruppo e dati aggregati
• Utilizzare sottoquery
• Usare espressioni di tabella
• Utilizzare i set operatori
• Utilizzare ranking finestra, offset e funzioni di aggregazione
• Eseguire stored procedure
• Programmazione con T-SQL
• Implementare la gestione degli errori
• Implementare le transazioni

A chi è rivolto?
Database Administrators, Database Developers, Business Intelligence professionals.

Prerequisiti
Per partecipare con profitto a questo corso è necessario che gli allievi possiedano i seguenti prerequisiti:
• Conoscenza operativa di database relazionali.
• Conoscenza di base del sistema operativo Microsoft Windows e la sua funzionalità di base.

Contenuti
Module 1: Introduction to Microsoft SQL Server 2014
This module introduces the SQL Server platform and major tools. It discusses editions, versions, tools used to query, documentation sources, and the logical structure of databases.
Module 2: Introduction to T-SQL Querying
This module introduces Transact SQL as the primary querying language of SQL Server. It discusses the basic structure of T-SQL queries, the logical flow of a SELECT statement, and introduces concepts such as
predicates and set-based operations.

Module 3: Writing SELECT Queries
This module introduces the fundamentals of the SELECT statement, focusing on queries against a single table.

Module 4: Querying Multiple Tables
This module explains how to write queries which combine data from multiple sources in SQL Server. The module introduces the use of JOINs in T-SQL queries as a mechanism for retrieving data from multiple tables.

Module 5: Sorting and Filtering Data
This module explains how to enhance queries to limit the rows they return, and to control the order in which the rows are displayed. The module also discusses how to resolve missing and unknown results.

Module 6: Working with SQL Server 2014 Data Types
This module explains the data types SQL Server uses to store data. It introduces the many types of numeric and special-use data types. It also explains conversions between data types, and the importance of type precedence.

Module 7: Using DML to Modify Data
This module describes the use of Transact-SQL Data Manipulation Language to perform inserts, updates, and deletes to your data.

Module 8: Using Built-In Functions
This module introduces the use of functions that are built in to SQL Server Denali, and will discuss some common usages including data type conversion, testing for logical results and nullability.

Module 9: Grouping and Aggregating Data
This module introduces methods for grouping data within a query, aggregating the grouped data and filtering groups with HAVING. The module is designed to help the student grasp why a SELECT clause has restrictions placed upon column naming in the GROUP BY clause as well as which columns may be listed in the SELECT clause.

Module 10: Using Subqueries
This module will introduce the use of subqueries in various parts of a SELECT statement. It will include the use of scalar and multi-result subqueries, and the use of the IN and EXISTS operators.

Module 11: Using Table Expressions
This module introduces T-SQL expressions which return a valid relational table, typically for further use in the query. The module discusses views, derived tables, common table expressions and inline table-valued functions.

Module 12: Using Set Operators
This module integrates Microsoft SharePoint Server as a platform for BI, and then focuses on building BI dashboards and scorecards with PerformancePoint Services.

Module 13: Using Window Ranking, Offset, and Aggregate Functions
This module introduces window functions including ranking, aggregate and offset functions. Much of this functionality is new to SQL Server 2012. It will cover the use of T-SQL functions such as ROW_NUMBER, RANK, DENSE_RANK, NTILE, LAG, LEAD, FIRST_VALUE and LAST_VALUE to perform calculations against a set, or window, of rows.

Module 14: Pivoting and Grouping Sets
This module discusses techniques for pivoting data in T-SQL as well to introduce the fundamentals of the GROUPING SETS clause. It will also cover the use of GROUP BY ROLLUP and GROUP BY CUBE syntax in SQL Server.

Module 15: Executing Stored Procedures
This module introduces the use of existing stored procedures in a T-SQL querying environment. It discusses the
use of EXECUTE, how to pass input and output parameters to a procedure, and how to invoke system stored procedures.

Module 16: Programming with T-SQL
This module provides a basic introduction to T-SQL programming concepts and objects. It discusses batches, variables, control of flow elements such as loops and conditionals, how to create and execute dynamic SQL statements, and how to use synonyms.

Module 17: Implementing Error Handling
This module introduces the use of error handlers in T-SQL code. It will introduce the difference between compile errors and run-time errors, and will cover how errors affect batches. The module will also cover how to control error handling using TRY/CATCH blocks, the use of the ERROR class of functions, and the use of the new THROW statement.

Module 18: Implementing Transactions
This module introduces the concepts of transaction management in SQL Server. It will provide a high-level overview of transaction properties, cover the basics of marking transactions with BEGIN, COMMIT and ROLLBACK.

Certificazioni
Il corso è propedeutico per i seguenti esami:
• 70-461 - Querying Microsoft SQL Server 2012/2014