Writing T-SQL Queries for Beginners Using Microsoft SQL Server 2012

Institution: **Phone:** +

Instructor: **E-mail:**

Hours: 30

Intro

Transact-SQL is central to using SQL Server. All applications that communicate with an instance of SQL Server do so by sending Transact-SQL statements to the server, regardless of the user interface of the application. It's a part of necessary skill set for every application developer and database programmer based on Microsoft technologies.

Description:

Target Audience This course is intended for Database Administrators, Database Developers, Business Intelligence Professionals and other people new to Transact-SQL and need to write properly structured T-SQL queries.

Goals:

The goal of this three-day instructor-led course is to provide students with the basic knowledge and skills necessary to effectively write Transact-SQL (T-SQL) queries using Microsoft SQL Server 2014.

Prerequired:

Students should have a basic knowledge of the following:

- Microsoft SQL Server 2008/2014/2014
- Basic understanding of relational databases.

Minimum PCs requirement: Intel Core i5, 8GB RAM, 500 GB HDD.

PCs has to have the following software preinstalled: Windows with SQL Server 2014

Type of exam:

1- Practical exam for evaluation of T-SQL skills

Pregled kursa:

Module	Decription
Module 1: Fundamentals of Database and T-SQL	This module provides the background knowledge of database concepts and Transact-SQL. Lessons presented in this module will provide an overview of SQL Server 2012, components and database objects. You will also learn the basics of T-SQL, syntax elements and how to use the built-in SQL Server tools.
Module 2: Retrieving and Filtering Data	This module describes how to retrieve and filter data using SELECT statements. Lessons presented in this module will detail the elements of SELECT statement to retrieve and filter data using string functions, comparisons and logical operators. You will learn about NULL, the best practice when to use it and formatting the data output retrieved. You will also understand performance issues and the recommended best practices retrieving data.
Module 3: Grouping and Summarizing Data	This module describes how to group and summarize data using aggregate functions. Lessons presented in this module will detail how to recognize scenarios where and when to use aggregations based on AVG, SUM, COUNT and other set based functions. You will have an understanding of the GROUP BY clause and filtering result sets with HAVING clause. You will also learn what crosstab queries are and how to use them.
Module 4: Querying Multiple Tables	This module describes how to query multiple tables to reduce data multiplication. Lessons presented in this module will detail how to query multiple tables using Joins. You will also learn how to limit result sets specific operators such as UNION, TOP and INTERSECT
Module 5: Working with Subqueries	This module describes what are subqueries are and how to use them. Lessons presented in this module will detail subqueries as expressions, the use of ANY, ALL and SOME operators and correlated subqueries. You will also learn the difference between subqueries, joins and temporary tables and when to use them.
Module 6: Statements for Modifying Data	This module describes how to modify data using statements. Lessons presented in this module will detail how to use the INSERT, DELETE and UPDATE statements. You will also gain an understanding of the concept of transaction, as an important element when dealing with data modifications.
Module 7: SQL Server Objects for Data Access	This module describes how to use SQL Server objects to access data. Lessons presented in this module will explain SQL Server views and how to create and manage them. You will also learn how to create and manage user-defined functions, stored procedures and triggers.
Module 8: Accessing System Catalogs, XML and Full-Text Indexes	This module describes the internal elements of a database and SQL Server 2012. Lessons presented in this module will detail catalogs (system and database), the tables, views, procedures, and functions in the master database. You will

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	learn what XML is and how it's implemented in SQL Server. You will also learn what full-text indexes are and how to query these indexes using predicates
Module 9: Advanced T-SQL Topics	This module describes some advanced T-SQL topics. Lessons presented in this module will provide an overview of the best practices for query data. You will also learn about SQL Azure and how to write queries on SQL Azure databases