

Course Outline



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SQL for Microsoft SQL Server

Course Description:

The objective of this course is to provide a comprehensive understanding of the structured query language (SQL) for Microsoft SQL Server users.

The course will provide delegates with the ability to use the Data Manipulation Statements (SQL) to query on, and change the contents of a relational database, using Microsoft SQL Server utilities.

Pre-requisites:

Delegates should be familiar with the concepts of a relational database, but no prior knowledge of SQL is required.

Course Content:

- **Introduction To Relational Databases**
 - Querying A Database
 - Central Resource
 - Definitions
 - Connecting Tables
 - The Course Database
 - Table Descriptions
 - Normalisation
 - First Normal Form (1NF)
 - Second Normal Form (2NF)
 - Third Normal Form (3NF)
 - Enterprise Rules
 - Normalisation Example

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- **Microsoft SQL Server Tools**
 - Enterprise Manager
 - Query Analyzer
 - SQL Management Studio

- **Transact-SQL**
 - Data Definition Language (DDL)
 - Data Manipulation Language (DML)
 - Data Control Language (DCL)

- **Data Definition Language**
 - Creating A Database
 - Create Database Statement
 - Naming Conventions & Schemas
 - Creating A Table
 - Ms SQL Server Data Types
 - Column Qualifiers
 - CREATE TABLE Statement
 - Altering A Table
 - ALTER TABLE Statement
 - Dropping A Table
 - DROP TABLE Statement
 - Creating An Index
 - CREATE INDEX Statement
 - Dropping An Index
 - DROP INDEX Statement
 - Full-Text Indexing
 - Constraints
 - Data Integrity
 - Referential Integrity
 - Domain Integrity
 - Implementing Constraints
 - Adding Constraints To Existing Tables

- **Loading Data Into A Database**
 - BULK INSERT Statement

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- **Data Manipulation Language**
 - Inserting Data Into A Table
 - INSERT Statement
 - Updating Records
 - UPDATE Statement
 - Deleting A Record
 - DELETE Statement
 - Retrieving Records
 - The SELECT Statement

- **Querying The Database**
 - Aggregate Functions
 - The WHERE Clause
 - Multiple Conditions
 - The TOP Option
 - The ORDER BY Clause
 - Union SELECTs
 - INTERSECT And EXCEPT
 - Aliasing
 - Date Functions
 - The Convert Function
 - Join Conditions
 - Inner Joins
 - Cross Joins
 - Outer Joins
 - The GROUP BY Clause
 - The HAVING Clause
 - The WITH CUBE And WITH ROLLUP Options
 - Sub Queries

- **Appendices**
 - Appendix 1 – Data Types.
 - Appendix 2 – Functions.
 - Appendix 2.1 - Date Functions.

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- **Appendices**
 - Appendix 2.2 – Mathematical Functions.
 - Appendix 2.3 – String Functions.
 - Appendix 2.4 – System Functions.

Course Duration:

2 Days