

ThriveDX™

SQL Server - Basic

TDXBI-103



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Time Commitment

3 days (total of 24 hours / 8 hours per day)

Skill Level

Basic Level

Course Category

BI & Big Data

Learning the **SQL** language is one of the most basic tasks required for the use of relational database. SQL proficiency is essential for business users, database developers, database administrators and any other database professional.

This course introduces the basics of the SQL language and the Relational Database Management System (RDBMS).

Target audience

The Target audience for this course is all professionals.

Among the specific groups for whom this course will be helpful are:

- Business and non-IT professionals
- Application designers and database developers
- Business Intelligence (BI) analysts and consumers
- Database administrators
- Web server administrators

Prerequisites

This course is designed for people with basic skills in Software (QA, Programming languages, technical support)



Objectives

The first part of this course explains the logical models upon which a relational database is based on, and the various configurations and environments in which you may work with the SQL database. The next part focuses on the actual SQL syntax for writing database queries. You will begin with the simplest of queries and then proceed onto moderately complex query scenarios. Finally, this course covers the DDL,

DML and transaction control portions of the SQL language that allow to create, maintain and manipulate application database objects and application data.

Program Structure

Module 1: Relational Databases & Data Models - 2 Hours

- Data Models
- Relational Model
- The Electronics Data Model
- Relational DBMS

Module 2: Tables & Data In tables - 6 Hours

- Creating tables
- Tables details
- Table columns
- Insert, Alter and Drop tables
- CRUD
- Alias

Module 3: Querying Multiple Tables - 4 Hours

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.

- Understanding Joins
 - Querying with Inner Joins
 - Querying with Outer Joins
 - Querying with Cross Joins and Self Joins
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Module 4: Sorting and Filtering Data - 4 Hours

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.

- Sorting Data
- Filtering Data with a WHERE Clause
- Working with Unknown and Missing Values

Module 5: Using Built-In Functions - 4 Hours

This module introduces the use of functions that are built into SQL Server Denali, and will discuss some common usages including data type conversion, testing for logical results and nullability.

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

Module 6: Sorting and Filtering Data - 4 Hours

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.

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

