

**Introduction to T-SQL for SQL Server for Report Writers**

**Course Number:** SQL-140
**Duration:** 2 days

**Overview**

Accelebrate's Introduction to T-SQL for SQL Server for Report Writers training class teaches attendees the T-SQL and SQL Server skills they need to develop queries, views, and stored procedures for SQL Server.

**Prerequisites**

This course can be adapted to any level of prior SQL Server and relational database experience.

**Materials**

All SQL Server training students receive comprehensive courseware.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will work well.

**Objectives**

* Understand how SQL Server works
* Learn to use SQL to output reports with SQL Server
* Learn to modify SQL Server data with SQL
* Learn how to write stored procedures for SQL Server

**Outline**

* Relational Database Basics
	+ Brief History of SQL
	+ Relational Databases [may be compressed due to attendee experience]
		- Tables
		- Rows
		- Columns
		- Relationships
		- Datatypes
		- Primary Keys
		- Foreign Keys
		- Relational Database Management System
	+ SQL Server Objects
		- Valid Object References
	+ SQL Statements
		- Database Manipulation Language (DML)
		- Database Definition Language (DDL)
		- Database Control Language (DCL)
* Simple SELECTs with SQL Server
	+ Introduction to the Northwind Database
	+ Some Basics
		- Comments
		- Whitespace and Semi-colons
		- Case Sensitivity
	+ SELECTing All Columns in All Rows
	+ Exploring the Tables
	+ SELECTing Specific Columns
	+ Sorting Records
		- Sorting By a Single Column
		- Sorting By Multiple Columns
		- Sorting By Column Position
		- Ascending and Descending Sorts
	+ The WHERE Clause and Operator Symbols
		- Checking for Equality
		- Checking for Inequality
		- Checking for Greater or Less Than
		- Checking for NULL
		- WHERE and ORDER BY
	+ The WHERE Clause and Operator Words
		- The BETWEEN Operator
		- The IN Operator
		- The LIKE Operator
		- The NOT Operator
	+ Checking Multiple Conditions
		- AND
		- OR
		- Order of Evaluation
	+ Writing SELECTs with Multiple Conditions
* Advanced SELECTs with SQL Server
	+ Calculated Fields
		- Concatenation
		- Mathematical Calculations
		- Aliases
	+ Aggregate Functions and Grouping
		- Aggregate Functions
		- Grouping Data
	+ Built-in Data Manipulation Functions
		- Common Math Functions
		- Common String Functions
		- Common Date Functions
* Subqueries, Joins, and Unions with SQL Server
	+ Subqueries
	+ Joins
		- Table Aliases
		- Multi-table Joins
	+ Outer Joins
	+ Unions
		- UNION ALL
		- UNION Rules
* Inserting, Updating and Deleting Records with SQL Server
	+ INSERT
	+ UPDATE
	+ DELETE
* Creating and Modifying Tables with SQL Server
	+ Creating Tables
	+ Datatypes
	+ Altering Tables
		- Adding a Column
		- Dropping a Column
	+ Renaming Tables
	+ Dropping Tables
* Views and Stored Procedures in SQL Server
	+ Creating Views
	+ Dropping Views
	+ Creating Stored Procedures
		- Designing a stored procedure
		- Specifying input parameters
		- Returning a recordset
		- Returning output parameters
	+ Testing stored procedures
* Conclusion