

# Delivering High Quality Databases Using Visual Studio 2026

SSDT2026 | 2 Days



Develop, test, and deliver high-quality SQL Server databases using Visual Studio and SQL Server Data Tools. This two-day course builds your fluency across database projects, schema-change management, T-SQL unit testing and static analysis, and automated build and deployment. You'll work hands-on the way a real team would.

## Who should take this course?

This course is for database developers and administrators working with modern SQL Server or Azure SQL. It's equally valuable for application developers writing and testing T-SQL who want a disciplined, source-controlled approach to database delivery. Experience developing, testing, and deploying databases on a team is helpful but not required.

## Course content

This course progressively builds your fluency with delivering high-quality databases using Visual Studio and SSDT, from agile database development and database projects to managing schema changes, assuring quality, and automating build and deployment. You'll work hands-on throughout, the way a real team would.

### 1. AGILE DATABASE DEVELOPMENT

- Agile database development overview
- Agility challenges and blockers
- SQL Server Data Tools (SSDT)
- Connected vs. disconnected development
- Imperative vs. declarative development
- Agile database techniques

### 2. SQL SERVER DATABASE PROJECTS

- Creating a SQL Server database project
- Treating schema as source code
- Importing schema and .dacpac files
- Importing scripts
- Managing cross-database dependencies
- Database references and the development lifecycle

### 3. MANAGING SCHEMA CHANGES

- Version control with Azure Repos and Git
- Basic Git workflow
- Managing schema changes in source control
- Comparing and syncing schema
- Comparing and syncing data
- Rolling back changes with Git and snapshots

### 4. ASSURING A HIGH-QUALITY DESIGN

- Database unit testing principles
- Levels of database unit testing
- SQL Server unit tests and the test designer
- T-SQL assertions vs. test conditions
- Using tSQLt for SQL Server unit testing
- Static code analysis
- Database refactoring tools

### 5. BUILDING AND DEPLOYING

- Building the database project
- Pre-build and post-build events and scripts
- The LocalDB isolated sandbox
- Deploying and publishing to SQL Server
- Publishing profiles and SQLCMD variables
- Composite projects and SQL CLR objects
- Pipeline integration: CI and CD

## Course Designer

This course was designed by Richard Hundhausen, Microsoft's first Visual Studio ALM/DevOps MVP, a Professional Scrum Trainer, and co-creator of the Nexus framework, with decades helping teams build and ship software. To see other Visual Studio courses, visit [www.accentient.com](http://www.accentient.com).