

Course 2779B: Implementing a Microsoft SQL Server 2005 Database

Prerequisites:

Before attending this course, students must have:

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- Working knowledge of Transact-SQL.
- Working knowledge of relational databases.
- Some experience with database design.

In addition, it is recommended, but not required, that students have completed:

- Course 2778: Writing Queries Using Microsoft SQL Server 2005 Transact-SQL.
- Course 2780: Maintaining a Microsoft SQL Server 2005 Database.

Module 1: Creating Databases and Database Files

This module explains how to create databases, filegroups, schemas, and database snapshots.

Lessons

- Creating Databases
- Creating Filegroups
- Creating Schemas
- Creating Database Snapshots

Lab: Creating Databases and Database Files

- Creating a Database
- Creating Schemas
- Creating a Database Snapshot

Module 2: Creating Data Types and Tables

This module explains how to create data types and tables. It also describes how to create partitioned tables.

Lessons

- Creating Data Types
- Creating Tables
- Creating Partitioned Tables

Lab: Creating Data Types and Tables

- Creating Data Types
- Creating Tables
- Creating Partitioned Tables

Module 3: Using XML

This module explains how to use the FOR XML clause and the OPENXML function. It also describes how to use the xml data type and its methods.

Lessons

- Retrieving XML by Using FOR XML
- Shredding XML by Using OPENXML
- Introducing XQuery
- Using the xml Data Type

Lab: Using XML

- Mapping Relational Data and XML
- Storing XML Natively in the Database
- Using XQuery with xml Methods

Module 4: Creating and Tuning Indexes

This module explains how to plan, create, and optimize indexes. It also describes how to create XML indexes.

Lessons

- Planning Indexes
- Creating Indexes
- Optimizing Indexes
- Creating XML Indexes

Lab: Creating and Tuning Indexes

- Creating Indexes
- Tuning Indexes
- Creating XML Indexes

Module 5: Implementing Data Integrity by Using Constraints

This module explains how to implement constraints and provides an overview of data integrity.

Lessons

- Data Integrity Overview
- Implementing Constraints

Lab: Implementing Data Integrity by Using Constraints

- Creating Constraints
- Disabling Constraints

Module 6: Implementing Data Integrity by Using Triggers and XML Schemas

This module explains how to implement triggers and XML schemas.

Lessons

- Implementing Triggers
- Implementing XML Schemas

Lab: Implementing Data Integrity by Using Triggers and XML Schemas

- Creating Triggers
- Implementing XML Schemas

Module 7: Implementing Views

This module explains how to create views.

Lessons

- Introduction to Views
- Creating and Managing Views
- Optimizing Performance by Using Views

Lab: Implementing Views

- Creating Views
- Creating Indexed Views
- Creating Partitioned Views

Module 8: Implementing Stored Procedures

This module explains how to create stored procedures and functions. It also describes execution plans, plan caching, and query compilation.

Lessons

- Implementing Stored Procedures
- Creating Parameterized Stored Procedures
- Working With Execution Plans
- Handling Errors

Lab: Implementing Stored Procedures

- Creating Stored Procedures
- Working With Execution Plans

Module 9: Implementing Functions

This module explains how to create functions. It also describes how to control the execution context.

Lessons

- Creating and Using Functions
- Working with Functions
- Controlling Execution Context

Lab: Implementing Functions

- Creating Functions
- Controlling Execution Context

Module 10: Implementing Managed Code in the Database

This module explains how to implement managed database objects.

Lessons

- Introduction to the SQL Server Common Language Runtime
- Importing and Configuring Assemblies
- Creating Managed Database Objects

Lab: Implementing Managed Code in the Database

- Importing an Assembly
- Creating Managed Database Objects

Module 11: Managing Transactions and Locks

This module explains how to use transactions and the SQL Server locking mechanisms to meet the performance and data integrity requirements of your applications.

Lessons

- Overview of Transactions and Locks
- Managing Transactions
- Understanding SQL Server Locking Architecture
- Managing Locks

Lab: Managing Transactions and Locks

- Using Transactions
- Managing Locks

Module 12: Using Service Broker

This module explains how to build a messaging-based solution with Service Broker.

Lessons

- Service Broker Overview
- Creating Service Broker Objects
- Sending and Receiving Messages

Lab: Using Service Broker (Optional)

- Creating Service Broker Objects
- Creating Service Broker Objects
- Implementing the Target Service

Module 13: Using Notification Services (Optional)

This module explains how to develop applications that generate and send timely messages to subscribers.

Lessons

- Introduction to Notification Services
- Developing Notification Services Solutions