Implementing a Microsoft SQL Server 2008 Database

Duration: 5 days

Course Description: This course provides students with the knowledge and skills to maintain a Microsoft SQL Server 2008 database. The course focuses on teaching individuals how to use SQL Server 2008 product features and tools related to maintaining a database.

Audience: Intended for IT Professionals who administer and maintain SQL Server databases.

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, and working knowledge of relational databases. Some experience with database design.

Topics

MODULE 1: CREATING DATABASES AND DATABASE FILES

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

Lab: Creating Databases and Database Files

- (Level 200) Creating a Database
- (Level 200) Creating Schemas
- (Level 300) Creating a Database Snapshot

MODULE 2: CREATING DATA TYPES AND TABLES

- Creating Data Types
- Creating Tables
- Creating Partitioned Tables

Lab: Creating Data Types and Tables

- (Level 200): Creating Data Types
- (Level 200): Using New Date and Time Data Types
- (Level 200): Creating Tables
- (Level 300) Creating Partitioned Tables

MODULE 3: CREATING AND TUNING INDEXES

- Planning Indexes
- Creating Indexes
- Optimizing Indexes

Lab: Creating and Tuning Indexes

- (Level 200) Creating Indexes
- (Level 300) Tuning Indexes

MODULE 4: IMPLEMENTING DATA INTEGRITY BY USING CONSTRAINTS AND TRIGGERS

- Data Integrity Overview
- Implementing Constraints
- Implementing Triggers

Lab: Implementing Data Integrity by Using Constraints and Triggers

- (Level 200) Creating Constraints
- (Level 200) Disabling Constraints
- (Level 300) Creating Triggers

MODULE 5: USING XML

- Using the XML Data Type
- Retrieving XML by Using FOR XML
- Shredding XML by Using OPENXML
- Introducing XQuery
- Creating XML Indexes
- Implementing XML Schemas

Lab: Using XML

- (Level 200) Mapping Relational Data and XML
- (Level 200) Storing XML Natively in the Database

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- (Level 300) Using XQuery with XML Methods
- (Level 200) Create XML Indexes
- (Level 300) Implementing XML Schemas

MODULE 6: IMPLEMENTING VIEWS

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

Lab: Implementing Views

- (Level 200) Creating Views
- (Level 200) Creating Indexed Views
- (Level 200) Creating Partitioned Views

MODULE 7: IMPLEMENTING STORED PROCEDURES

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

Lab: Implementing Stored Procedures

- (Level 300) Creating Stored Procedures
- (Level 300) Working with Execution Plans

MODULE 8: IMPLEMENTING FUNCTIONS

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

Lab: Implementing Functions

- (Level 300) Creating Functions
- (Level 300) Controlling Execution Context

MODULE 9: IMPLEMENTING MANAGED CODE IN THE DATABASE

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

Lab: Implementing Managed Code in the Database

- (Level 300) Importing an Assembly
- (Level 300) Creating Managed Database Objects

MODULE 10: MANAGING TRANSACTIONS AND LOCKS

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

Lab: Managing Transactions and Locks

- (Level 300) Using Transactions
- (Level 300) Managing Locks
- (Level 300) Using Partition Locking

MODULE 11: USING SERVICE BROKER

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

Lab: Using Service Broker

- (Level 300) Creating Service Broker Objects
- (Level 300) Implementing the Initiating Service
- (Level 300) Implementing the Target Service