

Introduction, 5 Days

Course Description

This course teaches you how to use the Transact-SQL language to query and program Microsoft SQL Server 2000 in a Windows 2000 Server environment. This course also assists you in preparing for the Microsoft Certified Systems Engineer and Microsoft Certified Database Administrator Exam #70-229, Designing and Implementing Databases with Microsoft SQL Server 2000 Enterprise Edition.

Prerequisites

Participants should already be familiar Windows and database concepts. No prior experience with SQL Server is necessary.

Topics Covered

Exploring Transact-SQL

Overview of SQL Server and Transact-SQL
Programming in Transact-SQL

Querying Data

Using the SELECT Statement
Formatting the Results Set

Changing Data Through Queries

Inserting/Deleting/Updating Data
Summarizing Data
Working with Aggregate Functions
Grouping Data

Joining Tables

Querying Multiple Tables
Implementing Advanced Table Joins

Implementing Subqueries

Designing Subqueries

Working with Full-text Indexes

Implementing the Microsoft Search Service
Querying Full-text Indexes

Programming Transact-SQL

Creating and Managing Views
Triggers, User-defined Functions

An Overview of SQL Server

Exploring the Components of SQL Server
Exploring Features of Microsoft SQL Server
Exploring the SQL Server Services
Identifying Administrative Utilities
Using SQL Server Enterprise Manager
Using SQL Query Analyzer
SQL Server Database Structure
Discussing the Components of SQL Server
Identify Default Databases / System Tables
Creating/Working with a Database Diagram
Understanding the SQL Server Architecture
Exploring the Application Architecture
Identifying SQL Server Management Tasks
Determining SQL Management Tasks
Configuring Server's Authentication Mode
Creating a SQL Login Account
Working With Server and Database Roles

Exploring Transact-SQL

Working with Transact-SQL
Using SQL Query Analyzer

Using Osql

Transact-SQL Statements
Creating a Simple Table
Inserting Data
Selecting Data
Assigning Permissions to Public DB Role
Programming in Transact-SQL

Using Variables

Saving a Script File
Choosing an XML Format

Designing and Implementing Databases

Identifying Database Design Issues
Designing Databases
Identify Space Requirements for Databases
Optimizing Database Performance
Creating Databases
Setting Database Options
Use Stored Procedures to View Information
Managing Databases
Configuring to Auto Shrink a DatabaseFile
Deleting a Database

Creating and Managing Tables

Design and Create Tables
Normalizing Table Designs
Maintaining Tables
Using Enterprise Mgr to Generate a Script

Designing & Implementing Data Integrity

Understanding Data Integrity
Implementing Constraints
Adding a Primary Key Constraint
Adding a Foreign Key Constraint
Adding a Default Constraint
Adding a Check Constraint
Disabling Constraint Checking

Implementing Indexes

Designing Indexing
Understanding Index Architecture
Implementing Indexes
Create Clustered Index on the Movie Table
Viewing the Information in Sysindexes
Maintaining Indexes
Rebuilding an Index
Recreate PrimaryKey Index

Generating a Workload File in SQL Profiler
Observing Index Statistics

Joining Tables

Querying Multiple Tables
Working with Cross Joins
Implementing Advanced Table Joins
Joining Multiple Tables
Working with Self Joins
Combining SELECT Statements
Creating New Table with SELECT INTO

Designing Advanced Queries

Designing Subqueries
Designing Single Value Subqueries
Changing Data Through Queries
Inserting Data Based on a Query
Deleting Rows Based on a Query

Designing Views

Creating and Managing Views
Creating a View
Displaying View Information
Dropping a View
Creating an Indexed View
Creating a Partitioned View
Creating Stored Procedures
Designing Stored Procedures
Research Stored Procedures Online
Running Extended Stored Procedures
Understanding Processes
Creating Stored Procedures
Creating a Stored Procedure
Executing a Stored Procedure
Using Parameters in Stored Procedures
Create With an Input Parameter
With Output Parameters
Managing Stored Procedures
Recompiling a Stored Procedure

Using Functions

Working with Aggregate Functions
Aggregate Functions to Summarize Data
Designing GROUP BY Queries
Using TOP in a Query
Designing/Creating User-defined Functions
Dropping a User-defined Function