

SQL SERVER 2012

INTRODUCTION

- ✓ What is a Database?
- ✓ Database Architectures
- ✓ SQL Server 2012 Architecture
- ✓ Editions of SQL Server 2012
- ✓ Installing SQL Server 2012
- ✓ Tools and utilities in SQL Server 2012

CREATING AND MANAGING DATABASES

- ✓ Data Storage
- ✓ System Databases
- ✓ Creating User-defined Databases
- ✓ Working with Databases

Case Study: creating an Inventory Database

SQL-The Structured Query Language

WORKING WITH TABLES

- ✓ Types of Tables
- ✓ Creating and Using tables
- ✓ Creating and using Partitioned Tables

RETRIEVING DATA

- ✓ SELECT Statement
- ✓ FROM and WHERE Clauses
- ✓ Using GROUP BY Clause
- ✓ Using HAVING Clause
- ✓ ORDER BY Clause
- ✓ Creating a Copy Table

DATA INTEGRITY

- ✓ What is Data Integrity?
- ✓ Types of Integrity Constraints
- ✓ Enabling and Disabling Constraints
- ✓ Rules and Defaults

Case Study: creating tables with data integrity in Inventory Database

JOINS

- ✓ What is a Join?
- ✓ Types of Joins
- ✓ Alternate syntax for joins
- ✓ Complex Joins

BUILT-IN FUNCTIONS

- ✓ Aggregate Functions
- ✓ Numeric Functions
- ✓ Date and Time Functions
- ✓ String Functions
- ✓ CAST and CONVERT

RETRIEVING DATA – ADVANCED

- ✓ What is a sub query?
- ✓ Types of Sub Queries
- ✓ Working with CORRELATED SUBQUERIES
- ✓ Working with CTE's
- ✓ Operators
- ✓ LIKE, IN, ANY, BETWEEN, EXIST

Case Study: Querying Inventory Database

VIEWS

- ✓ What is a View?
- ✓ Creating and using Views
- ✓ Materialized Views

NORMALIZATION

- ✓ What is Normalization?
- ✓ Normal Forms
- ✓ Advantages and Disadvantages
- ✓ Denormalization

T-SQL PROGRAMMING

INTRODUCTION

- ✓ Fundamentals
- ✓ Control-of-flow Language Statements
- ✓ Scripts and Batches

CURSORS

- ✓ What is a Cursor?
- ✓ Types of Cursors
- ✓ Statements in the usage of a Cursor
- ✓ @@FETCH_STATUS

TRANSACTIONS

- ✓ ACID Properties
- ✓ Types of Transactions
- ✓ COMMIT, ROLLBACK, SAVE

STORED PROCEDURES

- ✓ Definition
- ✓ Types of Stored Procedures
- ✓ Creating a Stored Procedure
- ✓ Input and Output Parameters
- ✓ Executing a Stored Procedure
- ✓ Error Handling in Stored Procedures
- ✓ Debugging a Stored Procedure

TRIGGERS

- ✓ Definition
- ✓ Creating a Trigger
- ✓ Types of Triggers
- ✓ DDL Triggers
- ✓ DML Triggers
- ✓ INSTEAD OF Triggers
- ✓ Setting Triggering Order

USER-DEFINED FUNCTIONS

- ✓ What is a UDF?
- ✓ Creating and using UDF's
- ✓ UDF's returning a table

SECURITY

- ✓ Security Basics
- ✓ Authentication Modes
- ✓ Creating a login
- ✓ Providing permissions on a database
- ✓ Providing permissions on database objects

PERFORMANCE TUNING

Tuning Queries

- ✓ When to Tune?
- ✓ Strategies in Tuning
- ✓ Evaluating Query Performance
- ✓ Tuning Query Performance
- ✓ Finding out which queries to Tune

Working with Indexes

- ✓ Index Uses
- ✓ Types of Indexes
- ✓ Creating Indexes
- ✓ Index Fragmentation
- ✓ Tuning Indexes

XML INTEGRATION

- ✓ XML Datatype
- ✓ Using XML Schema collections
- ✓ Retrieve Related Data as XML
- ✓ Transform XML data into Relational Data
- ✓ Query XML Data
- ✓ Manage XML Data

EXTENDING SQL SERVER FUNCTIONALITIES

- ✓
- ✓ Using SQLCLR and FileStreams
- ✓ Implementing Spatial Datatypes
- ✓ Implementing FullText Search
- ✓ Implementing Service Broker Solutions
- ✓ Distributed Queries
- ✓ Backup & Restoring Databases

NEW FEATURES IN SQL SERVER 2012

- ✓ Sequences
- ✓ Enhanced Exception Handling in stored procedures
- ✓ Introduction to Data Quality Services(DQS)

INTERVIEW BASED FAQ's

Certification Orientation