



Course Brochure

SQL Server

Overview

•Microsoft Sql Server 2012 is basically designed to suit the requirements of Database design and development. Audience gets complete knowledge on SQL commands, constraints, views, sub queries, indexes etc... as well as how to program with T-SQL i.e.. developing stored procedures, triggers, functions, cursors etc... Complete discussion on XML integration, CLR integration, Log on triggers, Ranking functions, new isolation levels etc.. Discusses all the advanced features of SQL Server 2012 and new features of SQL Server 2014

Pre-requisites

•Basic knowledge of Microsoft Windows operating system.Knowledge of any one language like C is added advantage.Knowledge of databases is another added advantage.

Applications

COURSE CONTENTS

Basics

- ❖ Database
- ❖ DBMS
- ❖ RDBMS
- ❖ Oracle and SQL Server

SQL Server Environment

- ❖ SQL Server 2005 and 2008, 2012, 2014
- ❖ New Features in SQL Server 2005 and 2008, 2012, 2014
- ❖ SQL Server Management Studio Enhancements
- ❖ SQL Server Business Intelligence Development Studio (BIDS)

SQL Language

- ❖ DDL
- ❖ DML (INSERT, UPDATE, DELETE, MERGE)
- ❖ TCL
- ❖ DDL
- ❖ DCL

Data Integrity

- ❖ Domain Integrity
- ❖ Entity Integrity
- ❖ Referential Integrity

Database Design

- ❖ Normalization
- ❖ De Normalization
- ❖ Database Diagrams (E-R)

Joins and Sub Queries

- ❖ SQL Operators
- ❖ Simple Queries
- ❖ Built in Functions
- ❖ Joins
- ❖ Sub-Queries
- ❖ Advanced Queries

Views

- ❖ Create View
- ❖ Advantage of Views
- ❖ Updatable Views
- ❖ Non Updatable Views
- ❖ Indexed View

Introduction to T-SQL

- ❖ Anonymous Block
- ❖ Stored Block

Introduction to Anonymous block

- ❖ Basic Programming
- ❖ Exception Handling
- ❖ Cursors

Stored block

Stored Procedures

- ❖ System Stored Procedure
- ❖ User Stored Procedures
- ❖ Advantages of Procedures
- ❖ Passing In/Out Parameters
- ❖ Altering Procedure
- ❖ Extended Stored Procedures

COURSE CONTENTS

User Defined Functions

- ❖ Scalar UDF
- ❖ Inline UDF
- ❖ Multi Statement Table UDF
- ❖ Table Variables, Temporary Tables

Triggers

- ❖ DML Triggers (After | Instead of)
- ❖ DDL Triggers
- ❖ Magic Tables
- ❖ Advantages of Triggers

Transactions and Locks

- ❖ Implicit Transactions
- ❖ Explicit Transactions
- ❖ TCL Commands
- ❖ Lock Types
- ❖ Isolation Levels
- ❖ Dead Locks
- ❖ MS-DTC

Indexes

- ❖ Clustered Index
- ❖ Non Clustered Index
- ❖ Creating Index
- ❖ Advantages of Indexes

XML Integration

- ❖ FOR XML
- ❖ OPEN XML
- ❖ XML Data Type

.NET 2.0 (CLR) Integration

- ❖ CLR Objects
- ❖ CLR Stored Procedures
- ❖ CLR User Defined Functions

Security

- ❖ Windows Authentication
- ❖ SQL Server Authentication
- ❖ Creating Login
- ❖ Database Permissions
- ❖ Introduction to Roles, Schema
- ❖ Dropping Login

Database Maintenance

- ❖ Backup Database
- ❖ Restore Database
- ❖ Deployment of Database
- ❖ Generating T-SQL Scripts and Batches
- ❖ System Databases and System Tables

SQL Server Agent

- ❖ Jobs
- ❖ Schedules
- ❖ Alerts
- ❖ Operators

Data Transformation Services

- ❖ BCP
- ❖ DTS Packages / SSIS Packages

Introduction to DBA Concepts

- ❖ Replication
- ❖ Performance Monitoring
- ❖ Service Broker