



6. Database Training

6.3 Microsoft SQL Server

Prerequisites:

1. SQL

Duration: 30 Lectures

Course Content:

1. Introduction

- 1.1. Introduction To DBMS
- 1.2. File Management System And Its Drawbacks
- 1.3. Database Management System (DBMS) and Data Models
- 1.4. Physical Data and Logical Data Models
- 1.5. Conceptual Data Models
- 1.6. Introduction To SQL Server

2. TSQL (Transact Structured Query Language)

- 2.1. Introduction To TSQL
- 2.2. History and Features of TSQL
- 2.3. Types Of TSQL Commands
- 2.4. Data Definition Language (DDL)
- 2.5. Data Manipulation Language (DML)
- 2.6. Data Query Language (DQL)
- 2.7. Data Control Language (DCL)
- 2.8. Transaction Control Language (TCL)
- 2.9. Database
- 2.10. Constrains
- 2.11. Procedural Integrity Constraints
- 2.12. Declarative Integrity Constraints
- 2.13. Not Null, Unique, Default and Check constraints



2.14. Data Types In TSQL

3. Data Manipulation Language

- 3.1. Insert
- 3.2. Identity
- 3.3. Creating A Table From Another Table
- 3.4. Inserting Rows From One Table To Another
- 3.5. Update
- 3.6. Computed Columns
- 3.7. Delete
- 3.8. Truncate
- 3.9. Differences Between Delete and Truncate

4. Data Query Language (DQL)

- 4.1. Select
- 4.2. Where clause
- 4.3. Order By Clause
- 4.4. Distinct Keyword
- 4.5. Isnull() function
- 4.6. Column aliases
- 4.7. Predicates

5. Built In Functions

- 5.1. Scalar Functions
- 5.2. Numeric Functions
- 5.3. Character Functions
- 5.4. Conversion Functions
- 5.5. Date Functions
- 5.6. Aggregate Functions

6. Top n Clause

- 6.1. Set Operators
- 6.2. Union



6.3. Intersect

6.4. Except

7. Joins

7.1. Inner Join

7.2. Equi Join

7.3. Natural Join

7.4. Non-Equi Join

7.5. Self Join

7.6. Outer Join

8. Sub Queries

8.1. Single Row Sub Queries

8.2. Multi Row Sub Queries

9. Indexes

9.1. Clustered Index

9.2. NonClustered Index

9.3. Create , Alter and Drop Indexes

9.4. Using Indexes

9.5. Security

10. Views

10.1. Purpose Of Views

10.2. Creating , Altering and Dropping Indexes

10.3. Simple and Complex Views

10.4. Encryption and Schema Binding Options in creating views

11. Transaction Management

11.1. Introduction

11.2. Begin Transaction

11.3. Commit Transaction

11.4. Rollback Transaction



- 11.5. Save Transaction
- 11.6. Role Of Log File In Transaction Management
- 11.7. Implicit Transaction

12. TSQL Programming

- 12.1. Drawbacks Of TSQL that leads to TSQL Programming
- 12.2. Introduction To TSQL Programming
- 12.3. Control statements In TSQL Programming
- 12.4. Looping Control Statements
- 12.5. While

13. Cursors

- 13.1. Working With Cursors
- 13.2. Types Of Cursors

14. Stored Sub Programs

- 14.1. Advantages
- 14.2. Stored Procedures
- 14.3. User Defined Functions
- 14.4. Triggers
- 14.5. Exception Handling

15. CLR Integration

- 15.1. What is CLR Integration and The Steps For Implementing It
- 15.2. A Simple Example With CLR Integration
- 15.3. Working With XML Data Type
- 15.4. Backup and Restore Of Database
- 15.5. Attach and Detach of Database
- 15.6. Normalization