

Introduction To DBMS

- File Management System And Its Drawbacks
- Database Management System (DBMS) and Data Models
- Physical Data Models
- Logical Data Models
- Relational Data Model (RDBMS)
- Object Relational Data Model (ORDBMS)

Introduction To SQL Server

- Entity – Relationship (E-R) Model
- Advantages and Drawbacks Of SQL
- Server Compared To Oracle And DB2
- Connecting To Server
- Server Type
- Server Name
- Authentication Modes
- Sql Server Authentication Mode
- Windows Authentication Mode
- Login and Password
- Sql Server Management Studio and Tools In Management Studio

TSQL (Transact Structured Query Language)

Introduction To TSQL

- History and Features of TSQL
- Types Of TSQL Commands
- Data Definition Language (DDL)
- Data Manipulation Language(DML)
- Data Query Language (DQL)
- Data Control Language (DCL)
- Transaction Control Language(TCL)
- Database(Create,Alter,Drop)

- Constrains
- Procedural Integrity Constraints
- Declarative Integrity Constraints
- Not Null, Unique, Default and
- Check constraints
- Primary Key and Referential
- Integrity or foreign key constraints
- Data Types In TSQL
- Table(Create,Alter,Drop)

Data Manipulation Language(DML)

- Insert
- Identity
- Creating A Table From Another Table
- Inserting Rows From One Table To Another
- Update
- Delete
- Truncate
- Differences Between Delete and Truncate

Data Query Language (DQL)

- Select
- Where clause
- Order By Clause
- Distinct Keyword
- Is null() function
- Column aliases
- Between ... And
- In
- Like
- Is Null

Functions

- Scalar Functions
- Numeric Functions
- Date Functions
- Aggregate Functions
- Group By and Having Clauses

- Super Aggregates Over(partition by ...) Clause
- Ranking Functions Common Table Expressions (CTE)

Joins

- Inner Join
- Self Join
- Outer Join
- Left Outer Join
- Right Outer Join
- Full Outer Join
- Cross Join

Sub Queries

- Single Row Sub Queries
- Multi Row Sub Queries
- Co-Related Sub Queries

Indexes

- Clustered Index
- NonClustered Index
- Create , Alter and Drop Indexes
- Using Indexes

Views

- Purpose Of Views
- Creating , Altering and Dropping Indexes
- Simple and Complex Views
- Encryption and Schema Binding Options in creating views

Transaction Management

- Introduction
- Begin Transaction
- Commit Transaction
- Rollback Transaction
- Save Transaction

Cursors

- Common Table Expressions (CTE)

- Working With Cursors
- Types Of Cursors
- Static, Dynamic and Keyset Cursors
- Local and Global Cursors

Stored Procedures

- Creating , Altering and Dropping
- Input and Output Parameters User Defined Functions
- Creating, Altering and Dropping
- Types Of User Defined Functions
- Table Valued Functions
- Inline Table Valued Functions
- Multi Statement Table Valued Functions

Triggers

- Purpose of Triggers
- Differences Between Stored Procedures and User Defined Functions and Triggers
- Creating, Altering and Dropping Triggers Exception Handling
- Implementing Exception Handling
- Adding and removing User Defined Error Messages To And From SQL Server Error Messages List

Security

- Login Creation
- SQL Server Authenticated Login
- Windows Authenticated Login
- User Creation
- Granting Permissions
- Revoking Permissions