RedBush Technologies

SQL Server Developer Training

SQL Server Training Course Duration

- 40 Hours, daily one and half hours

SQL Server Training Course Overview

Introduction and Foundation to SQL Server

- Connecting To Server
- Authentication Modes
- Sql Server Management Studio and Tools In Management Studio
- Create a sample database and table
- Your first SQL query
- Object Explorer Details
- Query Editor
- Data types and built-in functions
- CASE Expression

TSQL (Transact Structured Query Language)

- History and Features of TSQL
- Logical Query Processing
- Filtering data with WHERE clause
- Sorting data with ORDER BY
- Using TOP
- Types Of TSQL Commands (DDl,DML,DQL,DCL,TCL)

JOINS: Usage, Advantages/Disadvantages and Performance

- INNER JOINS
- OUTER JOINS
- CROSS JOINS
- SELF JOIN
- Multi-Join Queries
- SubQuery : Self Contained and Correlated Subqueries
- CTE(Common Table Expression)
- APPLY Operator: CROSS APPLY and OUTER APPLY

SET OPERATORS

- UNION and UNION ALL
- INTERSECT
- EXCEPT
- Grouping Data with GROUP BY
- HAVING clause

Commonly Used Functions:

- Aggregate Functions (SUM,COUNT,AVG,MIN,MAX)

- Ranking Functions (ROW_NUMBER,RANK,DENSE_RANK,NTILE)

Query a FULL-TEXT data

- Full text catalog
- Full Text Index
- CONTAINS and FREETEXT
- Full text search functions

Dealing with XML data

- Introduction and storage of XML data
- FOR XML RAW
- FOR XML AUTO
- FOR XML PATH
- Convert XML to table:OPENXML
- FOR XML clause
- Xquery and Xpath

Tables and Constraints

- Creating and altering table
- IDENTITY Column
- Computed Column
- PRIMARY KEY Constraint
- UNIQUE Constraint
- FOREIGN KEY Constraint
- CHECK Constraint
- DEFAULT Constraint

Views and Function

- Create and Alter view
- View Options: WITH ENCRYPTION, WITH SCHEMABINDING
- WITH CHECK Option
- Modify data from a view
- Indexed view
- Table valued functions
- Scalar valued functions
- Synonyms

INSERT, UPDATE and DELETE

- Simple Insert
- INSERT SELECT, INSERT EXEC,SELECT INTO
- UPDATE: Update based on join, Update based on variable, Update
- DELETE: Simple delete,DELETE based on a join
- DELETE vs. TRUNCATE
- SEQUENCE object
- MERGE Statement
- OUTPUT Clause

Transactions and Error Handling

- ACID Properties
- Transaction Commands
- Locking, Blocking and Deadlocks
- Isolation Levels
- Error handling
- Dynamic SQL

Stored Procedures

- Create, Alter and Execute stored procedure
- Use of BEGIN/END,RETURN,SET NOCOUNT, IF/ELSE
- WHILE, WAITFOR, GOTO

Triggers

- DML Triggers: After, Instead Of
- Nested Triggers
- DDL triggers

Query Optimization and performance

- Using SQL Server Profiler
- Extended Events
- Checking Execution plans
- Using DMV

Indexes:

- Heaps
- Clustered index
- Non clustered index
- Indexes and query performance
- Cursors
- Temporary table vs Table Variable

Project