

SQL SERVER COURSE CONTENTS

CHAPTER 1: Introducing SQL Server

- What is SQL Server
- Architecture of SQL Server
- SQL Server Editions
- Installing SQL Server
- Sql Server Instances
- Internals of Sql Server Database
- MDF & LDF Files
- Introducing SQL Server Management Studio
- Creating a Database

Assignments1

CHAPTER 3: Writing Queries

- INSERT queries
- UPDATE queries
- DELETE queries
- TRUNCATE
- The SELECT Clause
- The FROM Clause
- The WHERE Clause
- Mathematical Operator
- Conditional Operators
- AND , OR Operators
- Like Operators
- The ORDER BY Clause
- Using TOP N and TOP N PERCENT
- Aggregate Functions
- String Functions
- Date Functions
- Using GROUP BY and HAVING

CHAPTER 2: Basics of Database Design

- Data Types
- Designing Table Model
- DDL Commands
- Creating Tables
- Alteration of Table Design
- Add New Column, Drop Column
- Drop Table

Assignments2

CHAPTER 4: Constraint in SQL SERVER

- What is Constraint
- Adding constraints to columns in Tables
- Primary Key Constraints
- Unique Constraints
- Check Constraints
- Default
- Alter Constraints
- Drop Constraints
- Introduction to RDBMS
- Normalization
- Denormalization
- Why Relational Model
- Advantages of Relational Model
- Master Table & Child Tables
- Introduction to Foreign Key
- Creating Relations between tables

Assignments4

Assignments3

Evaluation 1: TEST / EXAM TO GAUGE THE PERFORMANCE (Mockup Interview)

CHAPTER 5: JOINS IN SQL SERVER

- Introduction to Joins
- Types of Joins
- Inner Join
- Left Outer Join
- Right Outer Join
- Full Outer Join
- Self-Join
- Writing Joins queries
- APPLYING CLAUSES USING JOINS

Assignments5

CHAPTER 6: Advanced SQL QUERIES

- OFFSET & FETCH
- SELECT INTO queries
- SUB-QUERIES
- UNION
- INTERSECT
- EXCEPT
- ROW_NUMBER
- RANK
- CUBE & ROLLUP

Assignments6

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CHAPTER 7: T-SQL

- What is T-SQL?
- Syntax Conventions
- Executing SQL Statements
- Identifiers
- Operators
- Variables
- Using T-SQL to Build and Alter Objects
- If else statements
- Case statements
- Looping statements
- Identity statements
- Error Handling
- Transactions

Assignments7

CHAPTER 8: Stored Procedures, Functions

- Introduction to Stored Procedures
- Writing Stored Procedures
- Alteration of Processing
- Using/Calling Procedures
- Using Input & Output Parameters
- Advantage of Stored Procedures
- Introduction to Functions
- Writing Functions
- Types of functions
- Scalar Functions
- Table Value Functions
- Comparison between Stored Procedures & Functions

Assignments8

Evaluation 2: TEST / EXAM TO GAUGE THE PERFORMANCE (Mockup Interview)

CHAPTER 9: Triggers

- Introduction to Triggers
- Creating DML Triggers
- Altering DML Triggers
- Types of Trigger
- Instead of Triggers
- After Triggers
- Using the Inserted and Deleted Tables
- Auditing Data using Triggers

Assignments9

CHAPTER 10: Types of Tables in SQL SERVER

- Temp Tables
- Local Temp Table
- Global Temp Table
- Usage of Temp Tables
- CTE
- Examples of CTE
- Comparison between Temp Tables, CTE & Table Variables
- Introduction to Views
- Creating Views
- Alteration of Views
- Types of Views
- Simple View & Complex View
- Usage of Views

Assignments10

CHAPTER 11: Indexes

- Introduction to Index
- Types of Indexes
- Clustered Index & Non Clustered Index
- Creating Indexes
- Improving query performance using Index
- Best Practices of Indexes Creation

Assignments11

CHAPTER 12: Advanced SQL-SERVER

- Authentication Modes in SQL SERVER
- Creating Users
- Backup
- Restore
- Automating Tasks using Jobs

Assignments12

Evaluation 3:FINAL TEST / EXAM TO GAUGE THE PERFORMANCE (Mockup Interview)

CASE STUDY - PROJECTS