

SQL for Data Analytics & Reporting

Introduction to SQL

1	Introduction to Database Management
	<ul style="list-style-type: none"> • What is database? • What is RDBMS?
2	Introduction to SQL Server
	<ul style="list-style-type: none"> • Advantages of SQL Server • Installing SQL Server 2017 • Installing SQL Server Management Studio • Connecting to Server from SSMS
	1. Server Type (Data Engine, Reporting, Analysis, Integration)
	2. Server Name
	3. Authentication Modes
	a). SQL Server Authentication Mode
	b). Windows Authentication Mode
	c). Login and Password
	4. Object Explorer
	5. Object Explorer details
	6. Query editor
3	Database
	<ul style="list-style-type: none"> • Creating Database • Deleting Database • Backup Database • Restore sample Database- Adventure Works

TSQL (Transact-Structured Query Language)

4	TSQL (Transact-Structured Query Language)	5	Table
	<ul style="list-style-type: none"> • Introduction to TSQL • Types of TSQL Commands 		<ul style="list-style-type: none"> • Creating Table • Creating a table from another table • Using Computed Columns • Altering Table • Adding Identity column • Drop Table
	1. Data Definition Language (DDL)		
	2. Data Manipulation Language (DML)		
	3. Data Query Language (DQL)	6	Constraints
	4. Data Control Language (DCL)		<ul style="list-style-type: none"> • Primary Key and Foreign key constraints
	5. Transaction Control Language (TCL)		<ul style="list-style-type: none"> • Not Null, Unique, Default and Check constraints
	<ul style="list-style-type: none"> • Differences between each language 		

7	Data Types In TSQL	11	Joins
	<ul style="list-style-type: none"> • Binary • Numeric • Text or String • Date & Date Time 		<ul style="list-style-type: none"> • Inner Join • Natural Join • Self-Join • Outer Join
8	Data Manipulation Language (DML)		<ul style="list-style-type: none"> • Left Outer Join • Right Outer Join • Full Outer Join • Cross Join
	<ul style="list-style-type: none"> • Insert • Inserting Rows from one table to another • Update • Delete • Truncate • Differences Between Delete and Truncate 	12	Set Operators
			<ul style="list-style-type: none"> • Union • Intersect • Except
9	Data Query Language (DQL)	13	Sub Queries
	<ul style="list-style-type: none"> • Select • Where Clause 		<ul style="list-style-type: none"> • Single Row Sub Queries • Multi Row Sub Queries • Nested Sub Queries
	<ol style="list-style-type: none"> 1. Between.. And 2. In 3. Like 4. Is Null 	14	Views
	<ul style="list-style-type: none"> • Order by Clause • Group By 		<ul style="list-style-type: none"> • Purpose of Views • Creating, Altering and Dropping Views • Simple and Complex Views
	<ul style="list-style-type: none"> • Distinct Keyword • Isnull () function • Column aliases • Table Aliases • Formatting a SQL Statement with each Clause in a new Line 	15	Security
			<ul style="list-style-type: none"> • Login Creation • SQL Server Authenticated Login • Windows Authenticated Login • User Creation • Granting Permissions • Revoking Permissions • Roles
10	Built in Functions	16	Transaction Management
	<ul style="list-style-type: none"> • Aggregate functions • String functions • Date functions • Mathematical functions • Ranking functions • Conversion functions • Logical functions 		<ul style="list-style-type: none"> • Introduction • Begin Transaction • Commit Transaction • Rollback Transaction

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