

# SQL SERVER 2017/2019

## SQL & T-SQL

### Course Overview

- This is 100% hands-on course; students will learn about running SQL Server development.
- **Helps to prepare 70-761 Microsoft exams.**
- We will discuss all the concepts with real time scenarios.
- Every concept is discussed with case study.
- Participants will get good foundation in SQL and easily can learn database administration as well as MSBI courses.
- FAQs and Interview Tips
- Recorded sessions so that you can refresh at any time.

### Target Participants

- Fresher, any one wants to enter into software field
- SQL Server Database Administrators
- IT Professionals

### Learning Formats

- Online interactive and video based training

### Our Trainer (s)

This course is delivered by **SQL Server expert and SME Mr. Kareem Syed**. He has hands on working experience on various SQL Server versions and recent cloud platforms. Having 18+years hand on experience he is technical consultant for some of the MNCs. You can visit his blog at **[www.azure-sql.blogspot.com](http://www.azure-sql.blogspot.com)** for more details.

## Course Contents

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| <p><b>1) Database Concepts</b></p> <ul style="list-style-type: none"> <li>• Introduction to storage Techniques</li> <li>• Database and Data models</li> <li>• History of DBMS</li> <li>• Files and databases</li> <li>• Various DBMS Products</li> <li>• Data Models</li> <li>• E-R Diagrams</li> <li>• Cardinality</li> </ul> | <p><b>2) Introduction to SQL Server</b></p> <ul style="list-style-type: none"> <li>• History</li> <li>• Features of SQL Server 2019</li> <li>• Tools of SQL Server</li> <li>• SQL Server Management Studio</li> <li>• Command Prompt Utilities</li> <li>• Other tools</li> <li>• SQL Server databases</li> </ul>                     |
| <p><b>3) Working with Databases</b></p> <ul style="list-style-type: none"> <li>• Creating Database</li> <li>• Creating Tables</li> <li>• Managing Databases</li> <li>• Database objects</li> <li>• T-SQL Features and Commands</li> </ul>  | <p><b>4) Data types and Operators</b></p> <ul style="list-style-type: none"> <li>• Data Types in SQL Server</li> <li>• Operators in SQL Server</li> </ul>  |
| <p><b>5) Sub-languages used in Sql Server</b></p> <ul style="list-style-type: none"> <li>• Working with DDL commands</li> <li>• Creating Tables</li> <li>• Types of Columns</li> <li>• Data types</li> <li>• Altering Table structure</li> <li>• Renaming Tables</li> <li>• Dropping Tables</li> </ul>                         | <p><b>6) Manipulating Data</b></p> <ul style="list-style-type: none"> <li>• Working with DML Commands</li> <li>• Types of Insertion</li> <li>• Inserting/ Deleting/Updating data</li> <li>• Working with WHERE clause</li> <li>• Identity function</li> <li>• Working with Truncate Command</li> <li>• Truncate or delete</li> </ul> |
| <p><b>7) Retrieving Data</b></p> <ul style="list-style-type: none"> <li>• Working with SELECT Command</li> <li>• Sql CLAUSES</li> <li>• Distinct</li> <li>• Order by</li> <li>• Top</li> <li>• Into</li> <li>• Group by and Having</li> <li>• Rollup and Cube</li> </ul>   | <p><b>8) Data Integrity</b></p> <ul style="list-style-type: none"> <li>• Enforcing Data Integrity</li> <li>• Data integrity Constraints</li> <li>• Domain Integrity Constraints</li> <li>• Referential Integrity Constraints</li> <li>• Working with On Delete Cascade, On Update Cascade</li> <li>• Managing Constraints</li> </ul> |
| <p><b>9) System Functions</b></p> <ul style="list-style-type: none"> <li>• Uses of Functions</li> <li>• Types of System Functions</li> <li>• Scalar</li> <li>• Aggregate</li> <li>• Ranking</li> </ul>   | <p><b>10) Joins</b></p> <ul style="list-style-type: none"> <li>• Working with JOINS</li> <li>• Inner joins</li> <li>• Self Join</li> <li>• Cross Join</li> <li>• Outer Join</li> <li>• SET Operators</li> </ul>  |

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| <p><b>11) Sub Queries</b></p> <ul style="list-style-type: none"> <li>• Working</li> <li>• with Sub Queries</li> <li>• Non-correlated Sub Queries</li> <li>• Correlated Sub Queries</li> <li>• Limitations of Sub Queries</li> <li>• Working with CTEs</li> <li>• Recursive Sub Queries</li> </ul>   | <p><b>12) Views</b></p> <ul style="list-style-type: none"> <li>• Working with Views</li> <li>• Advantages of Views</li> <li>• Types of Views</li> <li>• Simple and Complex</li> <li>• Indexed and Partitioned</li> <li>• View restrictions</li> </ul>  |
| <p><b>13) Indexes</b></p> <ul style="list-style-type: none"> <li>• Advantages of Indexes</li> <li>• Types</li> <li>• Clustered, Non-clustered</li> <li>• Managing Indexes</li> </ul>  | <p><b>14) Database Objects</b></p> <ul style="list-style-type: none"> <li>• Schemas</li> <li>• Synonyms</li> <li>• Sequence</li> <li>• Merge concept</li> <li>• Creating Login and Username</li> </ul>   |
| <p><b>15) T-SQL Programming</b></p> <ul style="list-style-type: none"> <li>• Fundamental Concepts</li> <li>• Variable Declarations</li> <li>• Procedure capabilities of T-SQL</li> </ul>  | <p><b>16) Cursors</b></p> <ul style="list-style-type: none"> <li>• Types of cursors</li> <li>• Advantages of Cursors</li> <li>• Working with Cursors</li> </ul>  |
| <p><b>17) User Defined Functions</b></p> <ul style="list-style-type: none"> <li>• Working with User Defined Functions</li> <li>• Types of Functions</li> <li>• Scalar and Table valued Functions</li> <li>• Difference between Functions and SP</li> </ul>  | <p><b>18) Stored Procedures</b></p> <ul style="list-style-type: none"> <li>• Advantages of SP</li> <li>• Life Cycle</li> <li>• Types of SP</li> <li>• Creating SP</li> <li>• Working with Parameters</li> <li>• Input/output parameters</li> <li>• Optional parameters</li> <li>• RETURN Statement</li> <li>• Exception Handling in S.P</li> <li>• Try/Catch block</li> <li>• Transaction Handling in SP</li> <li>• Using Recursion in SP</li> </ul> |
| <p><b>19) Triggers</b></p> <ul style="list-style-type: none"> <li>• Triggers</li> <li>• Advantages of Triggers</li> <li>• Types of Triggers</li> <li>• For/After Triggers</li> <li>• DML, DDL</li> <li>• Instead of Triggers</li> <li>• Working with Magic Tables</li> <li>• Logon Triggers in SP2</li> <li>• Trigger Limitations</li> <li>• Managing Triggers</li> </ul> | <p><b>20) Partition Tables</b></p> <p><b>21) Interview tips and FAQs</b></p> <p><b>22) New features for developers 2016/2017/2019</b></p>  |