

SQL Administration with SQL Server

Max: 30 Hrs

| S.NO | TOPICS | HOURS |
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| 1. | Introduction <ul style="list-style-type: none"> • What is SQL • Purpose of SQL • Who should learn SQL • What are the subsets of SQL • Data Definition Language • Data Manipulation Language • Data Control Language, and SQL vs. NoSQL • What is a Database • Database Objects • Database Tables • Table Records • Types of Database Management Systems • Relational Database Management Systems and SQL/Relational Databases vs. No SQL Databases. | 3 Hrs |
| 2. | Install a Database Engine <ul style="list-style-type: none"> • Download MS SQL Server or Oracle or MySQL Database Engine, and Install. • Launch SQL Server Management Studio, Select New Query, and launch SQL Query. • Type SQL Commands and Execute. | 3 Hrs |
| 3. | Syntax and Database <ul style="list-style-type: none"> • Focus on SQL Syntax, SQL keywords, SQL is not case sensitive, SQL Comments, SQL Commands, and writing SQL Statements. • SQL Numeric data types, Date and Time data types, Character and String data types, Unicode character string data types, Binary data types, and Miscellaneous data types. | 3 Hrs |
| 4. | SQL Operators and Expression <ul style="list-style-type: none"> • SQL Arithmetic Operators, Comparison Operators, Logical Operators, and Bitwise Operators. • SQL Boolean Expression, SQL Numeric Expression, and SQL Date Expression • SQL Comments, Comments are used to explain sections of SQL statements, or to prevent the execution of SQL statements. Single-Line Comments, and Multi-line Comments | 4 Hrs |

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| 5. | <p>Data Definition Language Commands and Operations</p> <ul style="list-style-type: none"> • SQL Data Definition Language Commands, Create, Alter, Drop, Truncate, and Rename. • Data Definition Language Operations, Create a Database, Use Database, Rename a Database, Drop Database, Create a Table, Rename Table, Add a Column to exiting Table, Add multiple columns to existing Table, Modify an existing column, Rename a Column, Drop a Column, Truncate a Table, and Drop a Table. | 3 Hrs |
| 6. | <p>Data Manipulation Language Commands and Operations</p> <ul style="list-style-type: none"> • Data Manipulation Language Commands, SELECT, INSERT, UPDATE, and DELETE. • Data Manipulation Language Operations, Retrieving data from a table, Inserting data into a table, Updating existing data into a table, and Deleting all records from a table. | 3 Hrs |
| 7. | <p>SQL – Data Control Language Commands</p> <ul style="list-style-type: none"> • DCL includes commands such as GRANT and REVOKE which mainly deal with the rights, permissions, and other controls of the database system. | 3 Hrs |
| 8. | <p>SQL Advance</p> <ul style="list-style-type: none"> • DCL Operation • SQL Function • SQL query and sub query • SQL Clauses • SQL Joins • SQL Views • SQL Indexes • SQL Transaction • SQL Injection • SQL vs. NoSQL | 8 Hrs |

