

KOENIG SOLUTIONS • COURSE OUTLINE

Bootcamp with SQL

Learn to install, configure and manage SQL Server, from database design and DML/DDL/DCL commands to joins, views and backups.

5 Days

40 HOURS

17

MODULES

87

TOPICS

COURSE OVERVIEW

The Bootcamp with SQL course is designed to provide learners with a comprehensive understanding of SQL Server, from basic setup to advanced data manipulation and management. This course is structured to build foundational knowledge, offering hands-on experience with real-world applications of SQL. Starting with setting up the SQL Server environment, participants will learn to install and configure Microsoft SQL Server and SQL Server Management Studio (SSMS) and understand both Windows and SQL Server authentication methods. As the course progresses, learners will delve into the essentials of SQL Server, including Database creation, understanding Data types, and the significance of Primary and foreign keys. The curriculum then advances through SQL's core commands, covering Data Manipulation Language (DML), Data Definition Language (DDL), and Data Control Language (DCL), ensuring a well-rounded skill set for performing various database operations. Practical exercises in Data filtering, Aggregate functions, Query statements, and the use of JOINS for combining data from multiple tables will solidify learners' command of SQL. Moreover, the course addresses Constraints, Views, Advanced SQL commands, and Stored procedures, equipping participants with the tools to handle complex database tasks efficiently. Finally, the bootcamp emphasizes crucial administrative skills such as Data import/export, as well as Backup and restoration of databases, preparing learners for real-world scenarios and enhancing their employability in the tech industry. By the end of the course, participants will be proficient in SQL and ready to tackle database challenges in their professional careers.

Who Should Attend

This SQL Bootcamp course is designed for beginners and IT professionals seeking to master SQL Server databases. Target audience for the Bootcamp with SQL course includes

Aspiring Data Analysts

Junior Database Administrators

IT Professionals looking to enhance their database management skills

Students pursuing a degree in Computer Science or Information Technology

Software Developers needing to integrate SQL into their applications

Business Analysts requiring data manipulation and query skills

System Administrators tasked with database maintenance and backups

Professionals transitioning to roles involving data management

Quality Assurance Testers who need to validate data

Report Developers who must create complex reports

Data Scientists beginning to work with SQL databases

BI (Business Intelligence) Consultants and Specialists

Project Managers overseeing IT projects with a data component

Non-technical roles, such as Marketing Managers, who need to understand data structures for decision-making purposes

LEARNING OBJECTIVES

- Install and configure SQL Server and SSMS
- Create databases, tables and define primary and foreign keys
- Apply DML, DDL and DCL commands for database operations
- Filter, aggregate and sort data using SQL statements
- Combine data from multiple tables using JOINS
- Implement constraints, views and stored procedures
- Import and export data between SQL Server and files
- Perform database backup and restoration

17 Modules, 87 Topics

01

SQL Server Setting Up

TOPICS

- Introduction
- Microsoft SQL Server Installation
- SQL Server Management Studio (SSMS) Installation
- How to connect MS SQL (Windows Authentication)
- How to connect MS SQL (SQL Server Authentication)
- Download and Restore Sample Database

02

Understanding the Basics of SQL Server

TOPICS

- Introduction
- Overview of Databases
- Creating Database
- SQL Data Types
- Column Data Types on SSMS
- Creating Table
- Overview of Primary Key and Foreign Key
- Primary Key
- Foreign Key
- Creating Temporary Tables

03

SQL DML (Data Manipulation Language)

TOPICS

Introduction · Insert statement · Update statement · Delete statement

04

SQL DDL (Data Definition Language)

TOPICS

Introduction · CREATE table statement · DROP statement · ALTER statement · TRUNCATE statement · COMMENT in query · RENAME

05

SQL DCL (Data Control Language)

TOPICS

Introduction · Create Database user · GRANT permissions · REVOKE permissions

06

SQL Statement Basic

TOPICS

Introduction · SQL Statement basic · SELECT Statement · SELECT DISTINCT · SELECT with column heading · Column AS statement

07

Filtering Data Rows

TOPICS

SELECT WHERE Clause - theory · SELECT WHERE Clause - practical

08

Aggregate Functions

TOPICS

Introduction · Count() · Sum() · Min() · Max() · AVG()

09

SQL Query Statements

TOPICS

Order By statement · SELECT TOP clause in SQL · BETWEEN command · IN operator · Wildcard Characters and LIKE

10

SQL Group by Statement

TOPICS

Introduction · Group by - theory · Group by - practical · HAVING statement

11

JOINS

TOPICS

- Introduction
- Inner join
- Left outer join
- Right outer join
- Full outer join
- Union
- Cross join
- Query Exercise
- Solution for Query Exercise

12

SQL Constraints

TOPICS

Introduction · Check constraint · NOT NULL constraint · UNIQUE constraint

13

Views

TOPICS

Introduction · Creating Views · Reporting with multiple tables

14

Advanced SQL Commands

TOPICS

Introduction · Timestamp · Extract from timestamp · Mathematical scalar functions · String functions · Subquery · SELECT with calculations

15

SQL Stored Procedures

TOPICS

Introduction · Create stored procedure · Stored procedure with parameter

16

Import & Export Data

TOPICS

Introduction · Import Flat File · Import .csv or excel file · Export Data to Excel or any format

17

Backup and Restore Database

TOPICS

Introduction · Creating Database backup · Restoring Database backup

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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