

Intermediate SQL Boot Camp: Prerequisites and Curriculum



About the Boot Camp

This Intermediate SQL Boot Camp is designed for learners who are ready to move beyond basic queries and start working with more realistic, complex datasets. The course focuses on advanced filtering techniques, working with dates and text fields, and understanding how to connect data across multiple tables to support deeper analysis.

Through hands-on exercises and real-world scenarios, you'll practice writing queries that answer meaningful business questions, improve data accuracy, and streamline analysis workflows. By the end of the boot camp, you'll be more confident navigating complex SQL queries and interpreting results used in reporting and decision-making.

SQL Prerequisites Topics

Database structure

Order by

Where

Group By

Aggregate functions

Having

Joins (Inner and Full)

Calculated fields

Text, dates, and numeric data types

Topics Required to Know:

Database Structure and Data Types

Overview of relational databases, data flow, and review common SQL terms

Database, schema, and tables overview

Retrieving Data from a Single Table

Retrieve data from a single table via the utilization of **SELECT** and **FROM** statements

Sort data using **ORDER BY** statements

Filtering, Calculating, and Aggregating Data

Utilize conditional operators to filter data using **WHERE** and **HAVING** statements

Perform mathematical operations on multiple fields via **calculated fields** and **aggregate functions**

Summarize aggregated data by categories while using **GROUP BY**

Retrieving Data from Multiple Tables

Retrieve data from at least 4 - 8 tables using various forms of **JOINS**

Curriculum

Part 1: Advanced Filtering

This portion of the training focuses on advanced SQL filtering techniques, showing you how to combine multiple conditions and create more powerful queries.

SQL Training Topics

Having

Like

Not Like

Or

Filtering Best Practices

 Parentheses and operator precedence

Training Syllabus

Partial/Wildcard Filters

Overview of filtering with wildcard filters or partial matches

Advanced Filtering

Integrate partial and non-partial filters in one query

Build complex filters by combining conditions with AND, OR, and parentheses

Filter aggregated data using HAVING

Part 2: Dates

This section of the training focuses on working with date data — including date calculations, month names, quarters, and year-based functions.

SQL Training Topics

Month

Monthname

Day

Dayname

Quarter

Year

Dateadd

Datediff

Training Syllabus

Date Extracting, Calculation, Filtering, and Grouping

Extract the year, quarter, month, and day from date column

Calculate the difference between dates

Predict future dates

Filter using date functions

Group data using date functions

Part 3: Text

This lesson covers simple ways to clean, adjust, and combine text in SQL so data is easier to read and use.

SQL Training Topics

Upper/Lower

Left/Right

Concat

Replace

Training Syllabus

Date Transformation

Change text to consistent uppercase or lowercase

Identify and use parts of a text value

Combine multiple text values together

Update or replace text with the correct or desired values

Part 4: Joins

In this part of the training, you'll learn how to use INNER, LEFT, RIGHT, and FULL joins to perform complex queries and extract insights from multiple tables.

SQL Training Topics

Inner Joins

Full Joins

Left Joins

Right Joins

Training Syllabus

Overview of join types (INNER, FULL, LEFT, and RIGHT)

Overview of joins case-scenarios

Extraction of multiple tables using a variety of join types



DATA TELLS A STORY. BE THE STORYTELLER