

# MASTER SQL

## IN 20 DAYS

Beginner to Advanced



Curated by  tutort academy

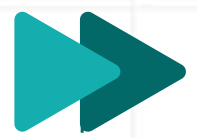
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# Stage 1: Getting Started



Day 1



## Understand the role of SQL in managing and querying data.

Learn basic terminology like tables, rows, columns, and queries.

Understand the role of SQL in managing and querying data.



Day 2



## Setting Up the Environment:

Install a relational database management system (RDBMS) like MySQL, PostgreSQL, or SQLite.

Familiarize yourself with a SQL client or command-line interface.

## Free Resources

[SQLZoo](#)



[Khan Academy - Intro to SQL](#)



# Stage 2: Core Concepts



Day 3



## Creating and Modifying Tables:

Design and create database tables with proper data types and constraints.

Understand primary keys, foreign keys, and indexing.



Day 4



## Basic Querying:

Write SELECT statements to retrieve data from a single table.

Use WHERE clause for data filtering.

Sort and limit results with ORDER BY and LIMIT.

Free Resources

[SQLBolt](#)



# Stage 2: Core Concepts



Day 5



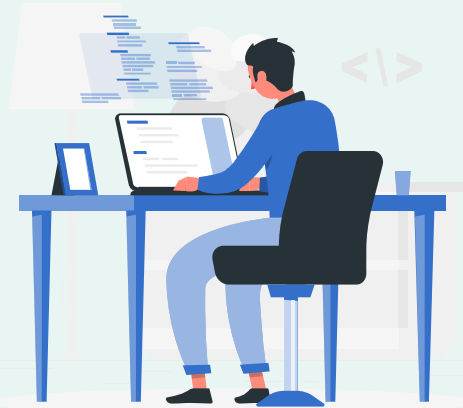
## Data Manipulation:

INSERT, UPDATE, and DELETE data in tables.

Practice altering table data safely.

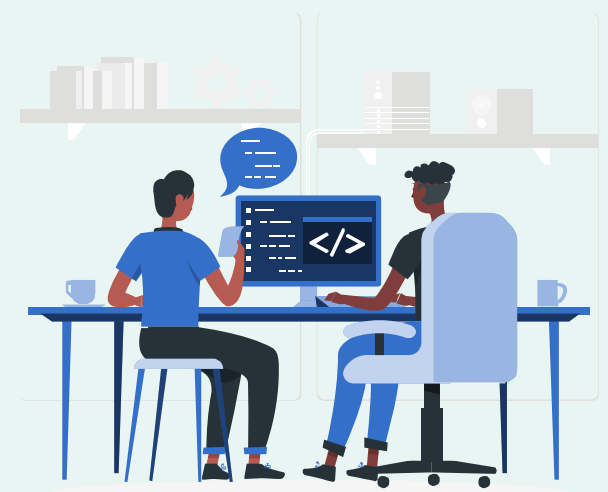
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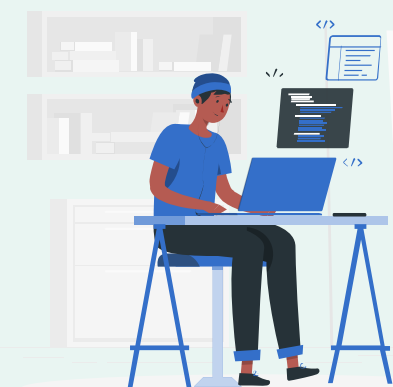
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MERN



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# Stage 3: Advanced Queries



Day 6

## ➤ Joins and Relationships:

Understand different JOIN operations (INNER, LEFT, RIGHT, FULL).

Learn about one-to-many and many-to-many relationships.



Day 7

## ➤ Subqueries and Derived Tables:

Write subqueries for complex filtering and aggregation.

Utilize derived tables for intermediate results.



Nikesh Bisen

From

JPMORGAN  
CHASE & CO.



To

 Microsoft

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# Stage 3: Advanced Queries



Day 8



## Conditional Logic and Functions:

Use CASE statements for conditional logic.

Explore SQL functions for string manipulation, date calculations, and more.

Free Resources:

[SQLZoo Advanced Tutorials](#)



## Why Tutort Academy?

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Gunjan Bhadani



If you have the courage to take your career in an analytical direction, Tutort Academy has the expertise, method, and support to help you. Extremely knowledgeable faculty with a thorough understanding of the industry. Highly recommended especially for working professionals.



Mohit Agarwal



When I started looking for a software development course, I found Tutort Academy completely matching my requirements. Apart from the content and live classes that they provide, the mentorship program is the cherry on the cake.

# Stage 4: Database Design and Optimization



Day 9



## Normalization:

Deep dive into database normalization for optimized data structure.

Understand the importance of reducing data redundancy.



Day 10



## Indexes and Performance:

Learn about indexes for improved query performance.

Optimize queries using execution plans.

Free Resources:

[Coursera - Database Management Essentials](#)





# Stage 4: Database Design and Optimization



Day 11

## ► Transactions and ACID:

Grasp transactions and their role in data integrity.

Understand ACID properties (Atomicity, Consistency, Isolation, Durability).



Subhadip  
Chowdhury

From



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## Stage 5: Advanced Topics



Day 12



### Window Functions:

Explore window functions for advanced analytical queries.

Learn about ranking, aggregation, and pagination.



Day 13



### Stored Procedures and Functions:

Create stored procedures and functions for encapsulated logic.

Understand the benefits of procedural SQL.

Free Resources:

[Modern SQL](#)



# Stage 5: Advanced Topics

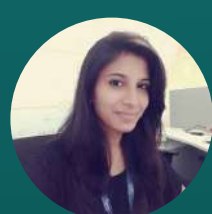


Day 14

## ► Database Security:

Learn about SQL injection and securing databases.

Understand user roles, permissions, and encryption.



Savitha  
Ranganathan



I got rejected in the Amazon interview. After that, I joined Tutort Academy for DSA concepts as a working professional. They fulfilled my all requirements and that is why I am in Microsoft right now. I highly recommend Tutort Academy for professionals.

## Stage 6: Practice, Practice, Practice



Day 15



### Free Resources for Practice

SQLZoo: This platform offers interactive tutorials and exercises that cover a wide range of SQL concepts and queries. It's suitable for beginners and more advanced learners.

[SQLZoo](#)



Day 16



### Free Resources for Practice

LeetCode: While primarily known for coding challenges, LeetCode also has a database section with SQL problems that help you practice various SQL skills.

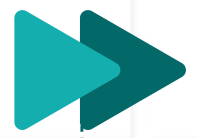
[LeetCode SQL](#)



## Stage 6: Practice, Practice, Practice



Day 17



### Free Resources for Practice

HackerRank: HackerRank provides a variety of coding and technical challenges, including SQL problems. It offers a great way to test and improve your SQL skills.

[HackerRank SQL](#)



Day 18



### Free Resources for Practice

SQLBolt is an online resource that provides interactive lessons and exercises to help you learn and practice SQL directly in your browser.

[SQLBolt Exercises](#)



Gopal  
Yadav

From



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## Stage 6: Practice, Practice, Practice



Day 19



### Free Resources for Practice

Codecademy: Codecademy offers a free SQL course with hands-on exercises that help you practice SQL queries and database manipulation.

[Codecademy SQL Course](#)



Day 20



### Free Resources for Practice

W3Schools SQL Exercises: W3Schools offers interactive SQL exercises that allow you to practice different SQL queries and concepts.

[W3Schools SQL Exercises](#)





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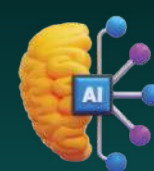


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