

# Beginner SQL Learning Roadmap

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## Week 1-2: Basics of SQL

- Goals: Understand what SQL is, basic querying
- Topics:
  - - SELECT, FROM, WHERE
  - - Filtering with AND, OR, IN, BETWEEN
  - - ORDER BY, LIMIT
- Resources:
  - - SQLBolt: <https://sqlbolt.com>
  - - Video: freeCodeCamp SQL Full Course (<https://www.youtube.com/watch?v=HXV3zeQKqGY>)
  - - Book: Learning SQL by Alan Beaulieu

## Week 3-4: Joins, Aggregation & Grouping

- Goals: Combine data across tables, basic analysis
- Topics:
  - - INNER JOIN, LEFT JOIN, RIGHT JOIN
  - - GROUP BY, HAVING
  - - COUNT(), SUM(), AVG(), MAX(), MIN()
- Resources:
  - - LeetCode SQL: <https://leetcode.com/problemset/database/>
  - - Mode SQL Tutorial: <https://mode.com/sql-tutorial/>
  - - YouTube: SQL joins visual explanation

## Week 5-6: Subqueries & CTEs

- Goals: Handle complex questions, clean your queries
- Topics:
  - - Subqueries (SELECT inside WHERE, etc.)
  - - CTEs (WITH clause)
  - - Nested queries
- Resources:
  - - StrataScratch: <https://www.stratascratch.com/>

- - YouTube: Subqueries and CTEs in SQL

## Week 7-8: Projects & Real-World Practice

- Goals: Build confidence by applying what you've learned
- Topics:
  - - Movie database queries
  - - Sales dashboard query system
  - - Build a small employee database
- Resources:
  - - Kaggle Datasets: <https://www.kaggle.com/datasets>
  - - Data.gov: <https://www.data.gov/>
  - - DB Fiddle: <https://www.db-fiddle.com/>
  - - SQLite Online: <https://sqliteonline.com/>

## Extras to Explore Later

- Goals: Broaden your SQL skillset
- Topics:
  - - Database Design & Normalization
  - - Window Functions (ROW\_NUMBER, RANK, etc.)
  - - SQL for Data Analysis (PostgreSQL or MySQL)