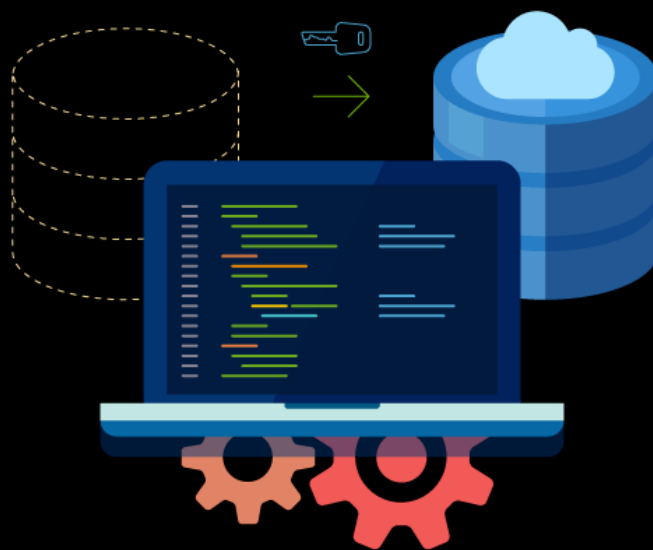


SQL

30 DAYS

ROADMAP

MASTER SQL FOR FREE IN JUST 30 DAYS



FREE RESOURCES TO LEARN AND PRACTICE ONLINE

Disclaimer: Everyone has a unique learning style and this roadmap shares my experience to help you learn SQL.

Rishabh Mishra

Week - 1

BASIC SQL- Introduction

First week learn basics of SQL: what is SQL, application, database, tables, data types, create, update, delete, filter, operators and sort values

SQL TOPICS	RESOURCES
Introduction to SQL	https://www.youtube.com/watch?v=yH1zCq-iaeU
Data Types, Primary-Foreign Keys & Constraints	https://www.youtube.com/watch?v=HmH-76_2Ak8
Install sql: postgresql and pgadmin4	https://www.youtube.com/watch?v=E-Qn2tbcmDE
CREATE Database & CREATE Table	https://www.youtube.com/watch?v=v-2clUgx_jw
INSERT UPDATE, DELETE & ALTER Table	https://www.youtube.com/watch?v=4YAAgrm8_ZI
SELECT Statement & WHERE Clause + Operators + Order By + Limit ★	https://www.youtube.com/watch?v=eiLqDeDp7Oc
W3schools website to learn SQL	https://www.w3schools.com/sql/

Note: Don't skip any topic mentioned above

Sample Questions

- What is SQL and Database, example **primary key** vs **foreign key**, types of **operators** etc.
- SELECT list of employees whose salary ranges between 2L to 3L
- Write a query to retrieve the list of employees from the same city
- Query to find the null values in the Employee table

Practice SQL

After completing week-1 topics,

- Solve **question 1** (a,b,c): https://youtu.be/aGGJLDgIrD8?si=9gucsXr_UCxatZJg
- Go to **HackerRank** and solve SQL questions use filter as Skills= SQL (Basic), Difficulty= Easy and Sub Domains= Basic Select + Advanced Select - [Click Here](#)

Note: If get stuck at any question, check the solution and learn/revise that topic

Week - 2

INTERMEDIATE SQL

Second week learn: Import file, SQL functions & types, String functions, Aggregate functions, Group By, Having clause and date time functions

SQL TOPICS	RESOURCES
Import Excel (CSV) File	https://www.youtube.com/watch?v=rfWYbMd3ApA
Functions in SQL + String Functions ★	https://www.youtube.com/watch?v=55_UN5gVARs
Aggregate Functions	https://www.youtube.com/watch?v=9NfthspFXEo
Group By and Having Clause ★	https://www.youtube.com/watch?v=SvJLXj05cow
Date Time Function + Extract Clause	https://www.youtube.com/watch?v=kWGH6XvLrEk
W3schools website to learn SQL	https://www.w3schools.com/sql/

Note: Don't skip any topic mentioned above

Sample Questions

- What is a **Function** in SQL, **types** of functions, user defined function, how to **import** files, explain String/Aggregate functions, what is **group by** and its use, where vs **having**, etc.
- Find male and female employees' ratio; fetch 50% records from the Employee table
- Query to fetch the employee's salary but replace the LAST 2 digits with 'XX'
- Query to find all the Employee names whose name starts/ends/contains
- Write a query to find and remove duplicate records from a table

Practice SQL

After completing Week-2 topics,

- Solve **question 2** (b,c), **3**, **5** (a,b), **7** (a): https://youtu.be/aGGJLDgIrD8?si=9guCsXr_UCxatZJg
- Solve **all interview** questions: <https://youtu.be/AZzTHWF7tEc?si=a1nXPCSffh11XYIR>
- Group by **interview** question (learnsql.com website): [Click Here](#)
- Go to **HackerRank** & solve SQL, use filter Skills= SQL (Basic), Difficulty= Medium- [Click Here](#)

Week - 3

ADVANCE SQL (*Very Important*)

Third week learn: SQL Joins, types of joins, Union, Union all, Sub query (with operators) and window functions with examples (Rank, Row Number, Lead/Lag, etc)

SQL TOPICS	RESOURCES
Complete SQL JOINS ★	https://www.youtube.com/watch?v=H6988OpZKTU
Union & Union ALL + SELF JOIN	https://www.youtube.com/watch?v=V3xjmBi1QQE
Sub Query	https://www.youtube.com/watch?v=5O2OuN1ougU
Window Function ★	https://www.youtube.com/watch?v=S1do1EeA7ng
W3schools website to learn SQL	https://www.w3schools.com/sql/

Note: Don't skip any topic mentioned above

Sample Questions

- What is a SQL **JOIN**, **types** of JOINS, **UNION vs UNION ALL**, **SELF JOIN**, **CROSS JOIN**, Sub query, window functions & examples, Aggregate **vs** window function etc.
- Explain row number, rank, dense rank and ntile functions.
- Find the cumulative sum of employee's salary; fetch even & odd rows from Emp table
- Find Nth highest salary from Emp table without using the TOP/LIMIT keywords
- Find the total count of employees joined each year in the company/ find monthly sales

Practice SQL

After completing Week-3 topics,

- Solve **question 2 (a), 4, 6, 9**: https://youtu.be/aGGJLDgIrD8?si=9gucsXr_UCxatZJg
- SQL window functions QnA (learnsql website): [Click Here](#)
- Solve **all** questions (SQLPractice website): <https://www.sql-practice.com/>
- Go to **HackerRank** & solve SQL, use filter Skills= All, Difficulty= All, Subdomains= 'Aggregation', 'Basic Join', 'Advanced Join'- [Click Here](#)

Week - 4

PRO SQL

Finally, fourth week learn: Case Statement/Expressions, Common table Expression (CTEs), WITH Clause, Recursive CTE, Store Procedure, Triggers. Now practice as much as you can!

SQL TOPICS	RESOURCES
Case Statement/Expression	https://www.youtube.com/watch?v=n_0kijUi7IA
Common Tables Exp CTEs in SQL ★	https://www.youtube.com/watch?v=WHBH0yz35_8
Recursive Queries/CTE	Click here
Stored Procedure	https://www.w3schools.com/sql/sql_stored_procedures.asp
Triggers in SQL	https://www.geeksforgeeks.org/sql-trigger-student-database/

Note: Don't skip top 3 topics mentioned above

Sample Questions

- Explain CTE and it's use cases, what is WITH clause, what is recursive CTE, explain CASE expressions, Stored procedure and use cases, Explain triggers, etc.
- Find the **2nd & 3rd highest** salary for each project from the Emp table
- Create **groups** based on salary column (low, med, high) based on salary range
- Query to **pivot** the data in the Employee table and retrieve the total salary for each city.
- Find the total monthly salary based on their team/project they are working in
- write a stored procedure, to retrieve the name of the employee based on their Id using the output parameter as @Name

Practice SQL

After completing Week-4 topics,

- Solve **all questions**: https://youtu.be/aGGJLDgIrD8?si=9gucsXr_UCxatZJg
- SQL CTEs QnA (learnsql website): [Click Here](#)
- Stored Procedure QnA (dotnettutorials website): [Click Here](#)
- Go to **HackerRank** & try to solve all questions (tick mark all options)- [Click Here](#)

FREE SQL RESOURCES

To Learn & Practice Online

Website to Practice SQL	RESOURCES
W3schools	https://www.w3schools.com/sql/
SQL Practice	https://www.sql-practice.com/
HackerRank	https://www.hackerrank.com/domains/sql
leetcode	https://leetcode.com/studyplan/top-sql-50/
SQL Zoo	https://sqlzoo.net/wiki/SQL_Tutorial
stratascratch	https://www.stratascratch.com/
8 week sql Challenge by Danny	https://8weeksqlchallenge.com/

Related Resources:

- COMPLETE SQL IN ONE VIDEO: [Click Here](#)
- SQL INTERVIEW QUESTIONS & ANSWERS: [Click Here](#)
- SQL PROJECT – MUSIC STORE ANALYSIS: [Click Here](#)
- DATA ANALYST ROADMAP: [Click Here](#)
- BUSINESS ANALYST ROADMAP: [Click Here](#)

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CLICK ON BELOW LINKS, FOR MORE VIDEOS /
POSTS RELATED TO DATA SCIENCE & ANALYTICS



YOUTUBE: <https://www.youtube.com/@RishabhMishraOfficial>



INSTAGRAM: <https://www.instagram.com/rishabhnmishra/>



LINKEDIN: <https://www.linkedin.com/in/rishabhnmishra/>

Free ka gyan 😊

“Karm karo, phal ki chinta mat karo.”

See you next time, until then . .

Keep learning n keep growing

