



PDF STUDY MATERIAL • UNCODEMY

# SQL for Data Analysts

Notes, roadmaps and practice material, curated by the Uncodemy trainer team.



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# Quick answer



Analysts use SQL to pull data, calculate KPIs, segment customers and prepare data for dashboards. The core skills are SELECT with filters, GROUP BY, JOINS, CASE WHEN and, for deeper analysis, window functions.



## Clear concepts

Short, plain-language explanations



## Hands-on practice

Examples and exercises to try yourself



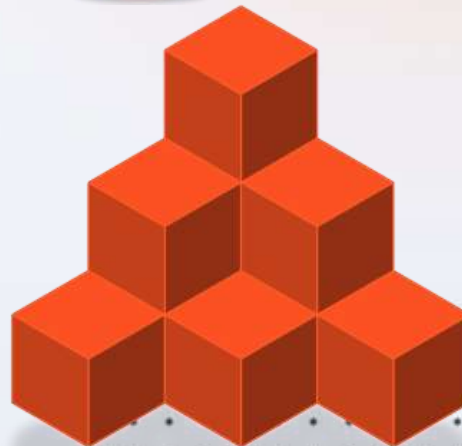
## Job-focused prep

Questions and checklists for interviews

# What analysts actually do with SQL

“

An analyst rarely builds databases. The daily work is asking questions of existing tables: how much did we sell, which customers came back, which segment grew. That means filtering, grouping, joining tables and shaping results for a dashboard. Writing clear, correct queries and checking their row counts matters more than clever tricks.



# Common analyst tasks and the SQL behind them

| Task                         | SQL idea                          |
|------------------------------|-----------------------------------|
| Total and average by group   | GROUP BY with SUM, AVG, COUNT     |
| Combine customers and orders | JOIN on the key                   |
| Customers with no orders     | LEFT JOIN with IS NULL            |
| Repeat customers             | GROUP BY with HAVING COUNT(*) > 1 |
| Segment customers            | CASE WHEN on totals               |
| Share of total               | Window function SUM() OVER ()     |

# Two examples (tested on a small practice dataset)

Customers with more than one order, and a simple value segment:

example

```
1  -- customers with more than one order
2  SELECT customer_id
3  FROM orders
4  GROUP BY customer_id
5  HAVING COUNT(*) > 1;
6
7  -- spend and segment per customer
8  SELECT customer_id,
9         SUM(amount) AS total_spend,
10        CASE WHEN SUM(amount) >= 300 THEN 'High' ELSE 'Standard' END AS seg
11  FROM orders
```

# Common mistakes



Joining without checking row counts: a join can silently duplicate rows.



Averaging averages: compute from the raw rows.



Ignoring NULLs: they change COUNT and AVG results.



Not validating: compare one query result with a number you can check by hand.

# How to use these PDFs



## STEP 1

### Read the roadmap

Start at the stage that matches your level.



## STEP 2

### Practise each topic

Try it yourself instead of only reading.



## STEP 3

### Revise key concepts

Use the tables before an interview or exam.



## STEP 4

### Move to the next stage

Go on when you can explain this one in your own words.

# Your SQL for Data Analysts PDF set



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# Frequently asked questions



## Which SQL topics matter most for data analysts?

SELECT with filters, GROUP BY and HAVING, JOINS, CASE WHEN, date functions and window functions cover most analyst work.



## How do I find repeat customers in SQL?

Group orders by customer and keep groups with more than one order using GROUP BY customer\_id HAVING COUNT(\*) > 1.



## What is the difference between WHERE and HAVING?

WHERE filters rows before grouping; HAVING filters groups after aggregation.

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# Data Analytics Program at a glance



**6-7 Months**

Program Duration



**120+ Hours**

of Learning



**75+**

Live Sessions



**10+**

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