

Intermediate SQL – Lesson 5: Filtering Groups with the HAVING Clause

What You'll Learn

In this lesson, you'll learn how to:

- Filter grouped (aggregated) data using the **HAVING** clause
 - Understand when and why to use **HAVING** instead of **WHERE**
 - Apply conditional logic to summarized data like counts and averages
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What is the HAVING Clause?

The **HAVING** clause is used to **filter results after aggregation** — meaning after data has been grouped using **GROUP BY**.

It works similarly to **WHERE**, but **WHERE** filters **individual rows**, while **HAVING** filters **groups**.

HAVING vs WHERE

Feature	WHERE	HAVING
Applies to	Individual rows	Aggregated/grouped rows
Used with	Simple conditions	Aggregate functions like COUNT, AVG, SUM
Position in query	Before GROUP BY	After GROUP BY

Example Use Case 1: Counting Job Titles

You've grouped employees by job title and now want to find which job titles have **more than one employee**.

You cannot use `WHERE COUNT(...) > 1` — that will trigger an error.
Instead, you use `HAVING COUNT(...) > 1` **after** the `GROUP BY` clause.

This gives you filtered, summarized results based on your groupings.

Example Use Case 2: Filtering by Average Salary

Imagine you're analyzing job titles and want to only see those with an **average salary above \$45,000**.

You would:

- Group by job title
- Use `AVG(Salary)` in your `SELECT`
- Then apply `HAVING AVG(Salary) > 45000`

This filters your summary to only show the higher-paying job titles.

Why It Matters

Many beginners mistakenly try to use `WHERE` with aggregate functions and hit confusing errors.
The `HAVING` clause is designed **specifically** for filtering results that have already been summarized.

Once you understand this, it unlocks the full potential of grouped data analysis in SQL.

Recap

- ✓ `HAVING` filters groups after aggregation
- ✓ Use it with `GROUP BY` and aggregate functions like `COUNT`, `AVG`, and `SUM`

- ✓ Always place **HAVING** **after** **GROUP BY** and **before** **ORDER BY**
- ✓ Essential for advanced filtering of summarized data