The HAVING Clause

In this lesson, we will learn about the HAVING clause.

WE'LL COVER THE FOLLOWING

The HAVING clause

The **HAVING** clause is utilized in SQL as a conditional clause with the `GROUP BY` clause. This conditional clause only returns rows where aggregate function results are matched with given conditions.

The `HAVING` clause was added to SQL because the `WHERE` keyword could not be used with aggregate functions.

Syntax

The basic syntax of the `HAVING` clause is as follows:

```
SELECT column1, column2, ... columnN

FROM table_name

WHERE [ conditions ]

GROUP BY column1, column2, ... columnN

HAVING [ conditions ]

ORDER BY column1, column2, ... columnN;
```

As you can see, the `HAVING` clause must follow the `GROUP BY` clause in a query and must also precede the `ORDER BY` clause if used.

Example

Consider the CUSTOMERS table below but with a few changes:

ID	NAME	AGE	ADDRESS	SALARY
1	Mark	32	Texas	50,000
2	Jeff	23	LA	77,000
3	John	25	NY	65,000
4	Emily	23	Ohio	20,000
5	John	31	Texas	54,000
6	Bill	25	Texas	75,000
7	Bob	28	NY	31,000
8	Elyse	29	Ohio	43,000
9	Tom	27	Washington	35,000
10	Jane	22	NY	45,0000

As you can see, there are many customers that live at the same `ADDRESS` (i.e. live in the same state).

We want to write a SQL statement that returns the number of customers in each state, but only if that state has more than 2 customers:

As we want to count the number of people living in the same state. We will apply the GROUP BY query on the ADDRESS column so we can group together the people who live in the same state.

We see these three people live in Texas, so they will be grouped together

The same will be done for the different groups of people living in the same states.

ID	NAME	AGE	ADDRESS	SALARY
1	Mark	32	Texas	50,000
2	Jeff	23	LA	77,000
3	John	25	NY	65,000
4	Emily	23	Ohio	20,000
5	John	31	Texas	54,000
6	Bill	25	Texas	75,000
7	Bob	28	NY	31,000
8	Elyse	29	Ohio	43,000
9	Tom	27	Washington	35,000
10	Jane	22	NY	45,0000

After being grouped together, the COUNT() function will count the number of people in each group. Then the HAVING clause will only return those ADDRESS that have count greater then two

ADDRESS	COUNT(ID)
NY	3
Texas	3

The code for the above query is written below:

```
SELECT ADDRESS, COUNT(ID)
FROM CUSTOMERS

GROUP BY ADDRESS
HAVING COUNT(ID) > 2;
```

In **line 3**, the GROUP BY statement groups the customers based on their `ADDRESS` and then the `HAVING` clause in **line 4** checks to see if the number of customers living in this state is greater than two using the `COUNT()` function.

Quick quiz!

Q

Will the following SQL statement will return those ADDRESS (i.e. states) that have customers who earn a combine total greater than 80000?

```
SELECT ADDRESS, SUM(SALARY)
FROM CUSTOMERS
GROUP BY ADDRESS
HAVING SUM(SALARY) > 80000;
```

COMPLETED 0%

1 of 1

In the next lesson, we will learn to assign aliases to columns and tables.