HAVING

This lesson demonstrates how to use the HAVING clause.

Having Clause

We are familiar with the **WHERE** clause that can be used to filter rows. In the same way, the **HAVING** clause allows us to filter groups. At times, the **HAVING** clause can be used to filter rows to display but that is not the intended use and can make the query slower. The **HAVING** clause should be used to decide what rows form each group. Remember the **HAVING** clause works on groups of rows whereas the **WHERE** clause works on individual rows. We'll work with a couple of queries in this lesson to clarify the concept.

Example Syntax

```
SELECT col1, AggregateFunction(col3) AS count

FROM table

GROUP BY col1, col2, ... coln

HAVING count > 75

ORDER BY col2;
```

Connect to the terminal below by clicking in the widget. Once connected, the command line prompt will show up. Enter or copy and paste the command **./DataJek/Lessons/24lesson.sh** and wait for the MySQL prompt to start-up.

```
-- The lesson queries are reproduced below for convenient copy/paste into the terminal.

-- Query 1
SELECT MaritalStatus, AVG(NetworthInMillions) AS NetWorth
FROM Actors
GROUP BY MaritalStatus
HAVING NetWorth > 450 OR NetWorth < 250;

-- Query 2
SELECT MaritalStatus, AVG(NetworthInMillions) AS NetWorth
FROM Actors
GROUP BY MaritalStatus
HAVING MaritalStatus='Married';

-- Query 3
SELECT MaritalStatus, AVG(NetworthInMillions) AS NetWorth
FROM Actors WHERE MaritalStatus='Married'
GROUP BY MaritalStatus;
```

Terminal

1. In the lesson on the **GROUP BY** clause we wrote a query to find out the average net worth of actors by their marital status. Now we can filter on the group results so that we only see those groups whose net worth is either greater than 450 million or less than 250 million.

   ```
   SELECT MaritalStatus, AVG(NetworthInMillions) AS NetWorth
   FROM Actors
   GROUP BY MaritalStatus
   HAVING NetWorth > 450 OR NetWorth < 250;
   ```

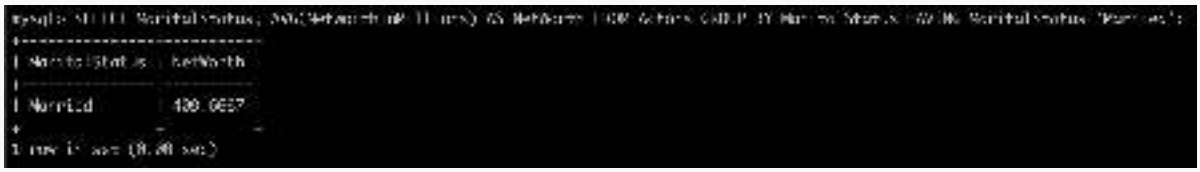
   

   Observe that one group has been filtered out because it didn't meet the conditions specified in the **HAVING** clause. Also notice, we define an alias for the function result so that we don't have to rewrite the

function in the conditions for the **HAVING** clause.

2. Usually, the **HAVING** clause is used with aggregate functions. If you find yourself writing a **HAVING** clause that uses a column or expression that isn't in the **SELECT** clause, it is likely you should be using the **WHERE** clause instead. For instance, consider the following query, which uses the marital status column in the **HAVING** clause.

```
SELECT MaritalStatus, AVG(NetworthInMillions) AS NetWorth
FROM Actors
GROUP BY MaritalStatus
HAVING MaritalStatus='Married';
```



The same query using the **WHERE** clause can be rewritten as follows:

```
SELECT MaritalStatus, AVG(NetworthInMillions) AS NetWorth FROM Ac
tors WHERE MaritalStatus='Married' GROUP BY MaritalStatus;
```