# Practices for Lesson 3: Restricting and Sorting Data

Practices for Lesson 3: Overview

In these practices, you will:

Select data and change the order of the rows that are displayed

Restrict rows by using the WHERE clause

Sort rows by using the ORDER BY clause

Using substitution variables to add flexibility to your SQL SELECT statements

Practice 3-1: Restricting and Sorting Data

Overview

In this practice, you build reports by using statements with the WHERE clause and the ORDER BY clause. You make the SQL statements more reusable and generic by including the ampersand substitution.

Assumptions

You have completed the lesson titled Restricting and Sorting Data.

Task

The HR department needs your assistance in creating some queries.

Because of budget issues, the HR department needs a report that displays the last name and salary of employees who earn more than $12,000. Save your SQL statement as a file named lab\_03\_01.sql. Run your query.

Open a new SQL Worksheet. Create a report that displays the last name and department number for employee number 176.

The HR department needs to find high-salaried and low-salaried employees. Modify lab\_03\_01.sql to display the last name and salary for any employee whose salary is not in the range $5,000 through $12,000. Save your SQL statement as lab\_03\_03.sql.

Create a report to display the last name, job ID, and hire date for employees with the last names of Matos and Taylor. Order the query in ascending order by hire date.

Display the last name and department ID of all employees in department 20 or department 50 in ascending alphabetical order by last\_name.

Modify lab\_03\_03.sql to display the last name and salary of employees who earn between $5,000 and $12,000, and are in department 20 or department 50. Label the columns Employee and Monthly Salary, respectively. Save lab\_03\_03.sql as lab\_03\_06.sql. Run the statement in lab\_03\_06.sql.

The HR department needs a report that displays the last name and hire date of all employees who were hired in 2010.

Create a report to display the last name and job title of all employees who do not have a manager.

Create a report to display the last name, salary, and commission of all employees who earn commissions. Sort the data in descending order of salary and commissions.

Use the column’s numeric position in the ORDER BY clause.

Members of the HR department want to have more flexibility with the queries that you are writing. They would like a report that displays the last name and salary of employees who earn more than an amount that the user specifies after a prompt. Save this query to a file named lab\_03\_10.sql. (You can use the query created in Task 1 and modify it.) If you enter 12000 when prompted, the report displays the following results:

The HR department wants to run reports based on a manager. Create a query that prompts the user for a manager ID, and generates the employee ID, last name, salary, and department for that manager’s employees. The HR department wants the ability to sort the report on a selected column. You can test the data with the following values:

manager\_id = 103, sorted by last\_name:

manager\_id = 201, sorted by salary:

manager\_id = 124, sorted by employee\_id:

If you have time, complete the following exercises:

Display the last names of all employees where the third letter of the name is “a.”

Display the last names of all employees who have both an “a” and an “e” in their last name.

If you want an extra challenge, complete the following exercises:

Display the last name, job, and salary for all employees whose jobs are either that of a sales representative or a stock clerk, and whose salaries are not equal to $2,500, $3,500, or $7,000.

Modify lab\_03\_06.sql to display the last name, salary, and commission for all employees whose commission is 20%. Save lab\_03\_06.sql as lab\_03\_15.sql. Rerun the statement in lab\_03\_15.sql.

Solution 3-1: Restricting and Sorting Data

The HR department needs your assistance in creating some queries.

Because of budget issues, the HR department needs a report that displays the last name and salary of employees earning more than $12,000. Save your SQL statement as a file named lab\_03\_01.sql. Run your query.

Open a new SQL Worksheet. Create a report that displays the last name and department number for employee number 176.

The HR department needs to find high-salaried and low-salaried employees. Modify lab\_03\_01.sql to display the last name and salary for all employees whose salary is not in the range $5,000 through $12,000. Save your SQL statement as lab\_03\_03.sql.

Create a report to display the last name, job ID, and hire date for employees with the last names of Matos and Taylor. Order the query in ascending order by hire date.

Display the last name and department ID of all employees in department 20 or department 50 in ascending alphabetical order by last\_name.

Modify lab\_03\_03.sql to list the last name and salary of employees who earn between

$5,000 and $12,000, and are in department 20 or department 50. Label the columns Employee and Monthly Salary, respectively. Save lab\_03\_03.sql as lab\_03\_06.sql. Run the statement in lab\_03\_06.sql.

The HR department needs a report that displays the last name and hire date of all employees who were hired in 2010.

Create a report to display the last name and job title of all employees who do not have a manager.

Create a report to display the last name, salary, and commission for all employees who earn commissions. Sort data in descending order of salary and commissions. Use the column’s numeric position in the ORDER BY clause.

Members of the HR department want to have more flexibility with the queries that you are writing. They would like a report that displays the last name and salary of employees who earn more than an amount that the user specifies after a prompt. (You can use the query created in Task 1 and modify it.) Save this query to a file named lab\_03\_10.sql.

Enter 12000 when prompted for a value in a dialog box. Click OK.

The HR department wants to run reports based on a manager. Create a query that prompts the user for a manager ID, and generates the employee ID, last name, salary, and department for that manager’s employees. The HR department wants the ability to sort the report on a selected column. You can test the data with the following values:

manager \_id = 103, sorted by last\_name manager\_id = 201, sorted by salary manager\_id = 124, sorted by employee\_id

If you have the time, complete the following exercises:

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If you want an extra challenge, complete the following exercises:

Display the last name, job, and salary for all employees whose job is that of a sales representative or a stock clerk, and whose salary is not equal to $2,500, $3,500, or $7,000.

Modify lab\_03\_06.sql to display the last name, salary, and commission for all employees whose commission amount is 20%. Save lab\_03\_06.sql as lab\_03\_15.sql. Rerun the statement in lab\_03\_15.sql.