# Practices for Lesson 4: Using Single-Row Functions to Customize Output

Practices for Lesson 4: Overview

Overview

In these practices, you will:

Write a query that displays the system date

Create queries that use numeric, character, and date functions

Perform calculations of years and months of service for an employee

Practice 4-1: Using Single-Row Functions to Customize Output

Overview

In this practice, you use the different functions that are available for character, number, and date data types. Remember that for nested functions, the results are evaluated from the innermost function to the outermost function.

Tasks

Write a query to display the system date. Label the column Date.

**Note:** If your database is remotely located in a different time zone, the output will be the date for the operating system on which the database resides.

The HR department needs a report to display the employee number, last name, salary, and salary increased by 15.5% (expressed as a whole number) for each employee. Label the column New Salary. Save your SQL statement in a file named lab\_04\_02.sql.

Run your query in the lab\_04\_02.sql file.

Modify your query in lab\_04\_02.sql to add a column that subtracts the old salary from the new salary. Label the column Increase. Save the contents of the file as lab\_04\_04.sql. Run the revised query.

Perform the following tasks:

Write a query that displays the last name (with the first letter in uppercase and all the other letters in lowercase) and the length of the last name for all employees whose name starts with the letters “A” or “M.” Give each column an appropriate label. Sort the results by the employees’ last names.

Rewrite the query so that the user is prompted to enter the letter that the last name

starts with. For example, if the user enters “H” (capitalized) when prompted for a letter, the output should show all employees whose last name starts with the letter “H.”

Modify the query such that the case of the letter that is entered does not affect the output. The entered letter must be capitalized before being processed by the SELECT query.

If you have time, complete the following exercises:

The HR department wants to find the duration of employment for each employee. For each employee, display the last name and calculate the number of months between today and the date on which the employee was hired. Label the column as MONTHS\_WORKED. Order your results by the number of months employed. The number of months must be rounded to the closest whole number.

**Note:** Because this query depends on the date when it was executed, the values in the

MONTHS\_WORKED column will differ for you.

Create a query to display the last name and salary for all employees. Format the salary to be 15 characters long, left-padded with the $ symbol. Label the column SALARY.

Create a query that displays the employees’ last names, and indicates the amounts of their salaries with asterisks. Each asterisk signifies a thousand dollars. Sort the data in descending order of salary. Label the column SALARIES\_IN\_ASTERISK.

Create a query to display the last name and the number of weeks employed for all employees in department 90. Label the number of weeks column as TENURE. Truncate the number of weeks value to 0 decimal places. Show the records in descending order of the employee’s tenure.

**Note:** The TENURE value will differ because it depends on the date on which you run the query.

Solution 4-1: Using Single-Row Functions to Customize Output

Write a query to display the system date. Label the column Date.

**Note:** If your database is remotely located in a different time zone, the output will be the date for the operating system on which the database resides.

The HR department needs a report to display the employee number, last name, salary, and salary increased by 15.5% (expressed as a whole number) for each employee. Label the column New Salary. Save your SQL statement in a file named lab\_04\_02.sql.

Run your query in the file lab\_04\_02.sql.

Modify your query in lab\_04\_02.sql to add a column that subtracts the old salary from the new salary. Label the column Increase. Save the contents of the file as lab\_04\_04.sql. Run the revised query.

Perform the following tasks:

Write a query that displays the last name (with the first letter in uppercase and all the other letters in lowercase) and the length of the last name for all employees whose name starts with the letters “A,” or “M.” Give each column an appropriate label. Sort the results by the employees’ last names.

Rewrite the query so that the user is prompted to enter the letter that starts the last name. For example, if the user enters H (capitalized) when prompted for a letter, the output should show all employees whose last names start with the letter “H.”

Modify the query such that the case of the letter that is entered does not affect the output. The entered letter must be capitalized before being processed by the SELECT query.

If you have time, complete the following exercises:

The HR department wants to find the duration of employment for each employee. For each employee, display the last name and calculate the number of months between today and the date on which the employee was hired. Label the column MONTHS\_WORKED. Order your results by the number of months employed. The number of months must be rounded to the closest whole number.

**Note:** Because this query depends on the date when it was executed, the values in the

MONTHS\_WORKED column will differ for you.

Create a query to display the last name and salary for all employees. Format the salary to be 15 characters long, left-padded with the $ symbol. Label the column SALARY.

Create a query that displays employees’ last names, and indicates the amounts of their salaries with asterisks. Each asterisk signifies a thousand dollars. Sort the data in descending order of salary. Label the column SALARIES\_IN\_ASTERISK.

Create a query to display the last name and the number of weeks employed for all employees in department 90. Label the number of weeks column as TENURE. Truncate the number of weeks value to 0 decimal places. Show the records in descending order of the employee’s tenure.

**Note:** The TENURE value will differ because it depends on the date when you run the query.