

Exercise 6. Scalar Functions

What This Exercise Is About

This exercise gives you the opportunity to work with scalar functions.

What You Should Be Able to Do

At the end of the lab, you should be able to:

- Code queries using scalar functions

Introduction

See the data model at the start of this Exercise Guide to get the column names and descriptions for each table.

Required Materials

- Student handout
- SQL Reference

Exercise Instructions

Problem 1

Produce a report listing all employees whose last name ends with 'N'. List the employee number, the last name, and the last character of the last name used to control the result. The LASTNAME column is defined as VARCHAR. There is a function which provides the length of the last name.

Problem 2

For each project, display the project number, project name, department number, and project number of its associated major project (COLUMN = MAJPROJ). If the value in MAJPROJ is NULL, show a literal of your choice instead of displaying a null value. List only projects assigned to departments D01 or D11. The rows should be listed in project number sequence.

Problem 3

The salaries of the employees in department E11 will be increased by 3.75 percent. What will be the increase in dollars? Display the last name, actual yearly salary, and the salary increase rounded to the nearest dollar. Do not show any cents.

Problem 4

Repeat Problem 3 but this time express the amount of salary increase as an integer, that is, a number with no decimal places and no decimal point. (QMF users, you do not get a decimal point even for Problem 3, so there is no point in doing this problem if you are using QMF.)

Problem 5

For each female employee in the company present her department, her job and her last name with only one blank between job and last name.

Problem 6

Calculate the difference between the date of birth and the hiring date for all employees for whom the hiring date is more than 30 years later than the date of birth. Display employee number and calculated difference. The difference should be shown in years, months, and days - each of which should be shown in a separate column. Make sure that the rows are in employee number sequence.

Problem 7

Display project number, project name, project start date, and project end date of those projects whose duration was less than 10 months. Display the project duration in days.

Problem 8

List the employees in department D11 who had activities. Display employee number, last name, and first name. Also, show the activity number and the activity duration (in days) of the activities started last. Multiple activities may have been started on the same day.

Problem 9

How many weeks are between the first manned landing on the moon (July 20, 1969) and the first day of the year 2000?

Problem 10

Find out which employees were hired on a Saturday or a Sunday. List their last names and their hiring dates.

END OF LAB