Exercise 1. SQL Basics Review, CUBE and ROLLUP

What This Exercise Is About

This exercise provides an opportunity to review some basic topics

What You Should Be Able to Do

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

- Code SELECT statements with multiple conditions
- Use the GROUP BY clause
- Use column functions
- Use the new super groups features, CUBE, ROLLUP, and RANK.

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

Ron is the SQL specialist in the department. Joe is a colleague of Ron and does not have SQL knowledge. Joe asked Ron for help to solve the following problems.

Note: See the data model at the beginning of this exercise guide for descriptions of the tables used in the labs and for their column names.

Problem 1

Joe's manager wants information about employees which match the following criteria:

- Their yearly salary is between 22000 and 24000.
- They work in departments D11 or D21.

List the employee number, last name, yearly salary, and department number of the appropriate employees.

Problem 2

Now, Joe's manager wants information about the yearly salary. He wants to know the minimum, the maximum, and average yearly salary of all employees with an education level of 16. He also wants to know how many employees have this education level.

Problem 3

Joe's manager is interested in some additional salary information. This time, he wants information for every department that appears in the EMPLOYEE table, provided that the department has more than five employees. The report needs to show the department number, the minimum, maximum, and average yearly salary, and the number of employees who work in the department.

Problem 4

Joe's manager wants information about employees grouped by department, grouped by sex and in addition by the combination of department and sex. List only those who work in a department which start with the letter D.

List the department, the sex, sum of the salaries, minimum salary and maximum salary.

Note, the solution of this and the next problem can only be used on DB2 UDB for UNIX, Windows and OS/2.

Problem 5

Joe's manager wants information about the average total salary for all departments. List in department order, the department, average total salary and rank over the average total salary.

END OF LAB