Homework Assignment 4
(due on Thursday November 6, 2003)

- Read Chapter 7 of the *Database System Concepts* book.
- Exercises 4.2 parts (h), (i), (j), (k), (l), 4.10 (b).
- The Computing Research Association (CRA) collects data on salaries of faculty members in Ph.D.-granting computer science departments in North America. CRA maintains a database that includes the following two tables:

  SALARIES(id-no, university, title, salary)
  RANKING(university, rank)

  The values of id-no are strings encoding names of faculty, while the values of title are “Lecturer”, “Assistant Professor”, “Associate Professor”, “Full Professor”. The values of rank are positive integers denoting the ranking of each university according to the latest survey by the National Research Council.

  Express the following queries in SQL:

  1. Find the average, maximum and minimum salary paid to each title (“Lecturer”, “Assistant Professor”, “Associate Professor”, “Full Professor”).
  2. Find the average, maximum and minimum salary paid to each title in universities ranked 1-12 (included).
  3. Find the average, maximum and minimum salary paid to each title in universities in which the computer science department has at least 20 faculty members.
  4. For each university, find the average, minimum and maximum salary paid to each title.
  5. For each university ranked 1-12 (included), find the average, minimum and maximum salary paid to each title.