Assignment 1
CSIS 3300-001
(10 marks in total, 5% toward your final grade)

Q1. Write the following queries in SQL, respectively, using the university schema discussed in class.

  a. Find the names of all instructors who have taught at least one Comp. Sci. course in Spring 2009. Make sure there are no duplicate names in the result.

  b. Across all departments, find the department with the lowest average salary of instructors. You may assume that every department has at least one instructor.

Q2. Consider the following relational database (PK for primary key, FK for foreign key). Write the following queries in SQL, respectively.

> employee(person_name(PK), street, city)
> works(person_name(PK, FK), company_name (FK), salary)
> company(company_name(PK), city)
> manages(person_name(PK, FK), manager_name (FK))

  a. Find the names of all employees who work for "First Bank Corporation".

  b. Find the names, street addresses, and cities of residence of all employees who work for "First Bank Corporation" and earn more than $10,000.

Q3. Consider the same database in Q2. Write the following queries in SQL.

  a. Find the names of all employees in the database who live in the same cities as the companies for which they work.

  b. Find the company that has the smallest payroll, namely the total salary.

  c. Give all managers of First Bank Corporation a 15 percent raise.

Q4. Consider the following relational database (PK for primary key, FK for foreign key). Write the following queries in SQL, respectively.

> member(memb_no(PK), name, age)
> book(isbn(PK), title, authors, publisher)
> borrowed(memb_no(PK, FK), isbn(PK, FK), date)

  a. Find the names of members who have borrowed any book published by McGraw-Hill.

  b. For each publisher, find the names of members who have borrowed more than three books of that publisher.

Submission

You need to submit your assignment through Blackboard community by the due date.

NO LATE SUBMISSION will be allowed.

All SQL queries should follow the Microsoft SQL Server syntax covered in classes.

You should do the assignment individually.

Your submission should be a PDF file named assignment1-yourstudentID.pdf that has a cover page with student name and student number.

You may submit your work multiple times, but only the last submission will be graded.

Q1 for 2 marks

Q2 for 2 marks

Q3 for 3 marks

Q4 for 2 marks

Cover page and submission in PDF format for 1 mark.