**CSC 453 Database Technologies 901/910**

**Assignment 2 (4/10)**

**Due 5:45pm, Monday 4/21 (since the university is closed on Friday 4/18).**

**Reading:** Sections 4.3, 5.1, and 5.3 of Elmasri & Navathe (and also pp.70-75 for the example database).  Chapters 2, 3, 6, 8, and 10 of Price's SQL book may also be helpful, though they contain much more material than we have covered.

Your task in this assignment is to write a set of SQL queries on a set of tables I supply.

**1.** First, download the script file company.sql from the course web site and run it in SQLDeveloper to construct the example database illustrated in Chapter 3 of Elmasri & Navathe (pp.70-75).  Inspect the schemas and tables in SQLDeveloper to make sure you understand the structure of the database.  (Note that some changes have been made to the database state -- it differs somewhat from the state that is illustrated in Figure 3.6 on p.72.)

**2.** In a separate .sql file (do not modify company.sql), write a script that contains the following twelve SQL queries (in this order):

1. Retrieve the names of all employees in department 5 who work more than 15 hours per week on the ProductX project.

2. List just the first name of all employees who have a son with the same first name as themselves.

3. Find the names of all employees who are directly supervised by 'Franklin T Wong'.

4. For each project, list the project name and the total hours per week (by all employees) spent on that project. (List the projects in alphabetical order.)

5. Retrieve the names of all employees who work on every project. (In other words, look at the list of projects given in the PROJECT table, and retrieve the names of all employees who work on every one of them.)  (Note that it is not sufficient for an employee the work on just some of the projects -- he/she must work on all of the projects to be included in the result.)

6. Retrieve the names of all employees who do not work on any project.  (In other words, look at the list of projects given in the PROJECT table, and retrieve the names of all employees who work on none of them.)

7. For each department, retrieve the department name and the average salary of all employees working in that department.  Order the output by department number in ascending order.

8. Retrieve the average salary of all female employees.

9. List the last names of all department managers who have no dependents.

10. For each department whose average salary is greater than $40,000, retrieve the department name and the number of employees in that department.

11. Retrieve the names of all employees who work in the department that has the employee with the lowest salary among all employees.

12. Retrieve the names of all employees whose supervisor's supervisor has '888665555' for his/her Ssn.

Add a comment before each query in your script file to label the queries 1 through 12 (e.g., the comment '-- 1.' on a line before the first query, the comment '-- 2.' on a line before the second query, et cetera).

Run the script file containing your queries to verify that your results are correct.

**3.** Include a comment at the top of your script file giving your name, the course number and section, the assignment number, and the date of submission, e.g.:

/\*  
*YourName*  
CSC 453 Section *YourSectionNumber*   
Assignment 2  
April *SubmissionDate*, 2014  
\*/

**4.** Submit the .sql file containing your queries under "Assignment 2".  You do not have to submit the output generated by the script.  Do not submit company.sql or include code from it in your submission -- your submitted file should contain only your queries and the requested comments.

**Remarks:**

1.  It is always your responsibility to make sure that any files you upload are readable and in the correct locations.  I recommend that you download them for yourself after submitting them to be sure that they have been uploaded correctly.

2.  Remember that this assignment, like all others, must be completed individually -- no collaboration among students is allowed.

Eric J. Schwabe – 04/10/14