Lab 1

Out: 09/22/15, Due: 10/06/15

Instructions: Submit a single zip file, via Moodle, containing: 1-SQL for the following queries, and 2-the output log of running these queries on Oracle. All files **must** be in text-only format.

1. Create the table "student" with five attributes: the student identifier as the primary key, the student name, student major, student standing (freshman/sophomore/junior/senior), and the student age.

2. Create the table "class" with three attributes: the class name as the primary key, the class schedule time, and the room number. Make sure that no two classes have the same combination of schedule and room.

3. Create the table "enrolled" that specifies which student is taking which class. The table will have two attributes: the student identifier, and the class name. A student can register in many classes. Assume any key constraints as appropriate. Make sure that in the case of deleting a student from the student table, all entries to this student will be deleted from the enrolled table. Also, reject the deletion of any course that has any enrolled students.

4. Insert the following eight entries into the student table:
   051135593, Maria White, English, SR, 21
   060839453, Charles Harris, Architecture, SR, 22
   099354543, Susan Martin, Law, JR, 20
   112348546, Joseph Thompson, Computer Science, SO, 19
   115987938, Christopher Garcia, Computer Science, JR, 20
   132977562, Angela Martinez, History, SR, 20
   269734834, Thomas Robinson, Psychology, SO, 18
   280158572, Margaret Clark, Animal Science, FR, 18

5. Insert the following four entries into the class table:
   Data Structures, MWF 10:00-11:00, R128
   Database Systems, MWF 12:30-1:45, 1320 DCL
   Operating System Design, TuTh 12-1:20, 20 AVW
   Archaeology of the Incas, MWF 3-4:15, R128

6. Insert the following seven entries into the enrolled table
   051135593, Data Structures
   060839453, Data Structures
   051135593, Database Systems
   060839453, Database Systems
   051135593, Operating System Design
   099354543, Operating System Design
   112348546, Operating System Design

7. Check for the primary constraint; insert the following entry into the student table:
   112348546, Juan Rodriguez, Psychology, JR, 20

8. Check for the uniqueness constraint; insert the following entry into the class table
   Algorithms, MWF 12:30-1:45, 1320 DCL

9. Check for foreign constraints; insert the following two entries into the enrolled table:
561254634, Data Structures
051135593, Communication Networks

10. Check for the integrity constraints; delete the following entry from the class table:
Data Structures, MWF 10:00-11:00, R128

11. Check for the integrity constraints; delete the following entry from the student table:
051135593, Maria White, English, SR, 21

12. Drop ALL of the created tables.

You will need an Oracle account in order to use the program; account information have been emailed to you. There will also be slides posted on the class website explaining how to use Oracle on the CSELabs machines.