Lab 2

Out: 10/06/15, Due 10/20/15

Instructions: Consider the following database schema (keys are underlined, field types are omitted):

- student(sid, sname, sex, age, year, gpa)
- dept(dname, numphds)
- prof(pname, dname)
- course(cno, cname, dname)
- major(dname, sid)
- section(dname, cno, sectno, pname)
- enroll(sid, grade, dname, cno, sectno)

Create these tables in your database; do not worry about foreign key constraints, as we won't be doing any more inserting or deleting. We have included several text files with data that you need to insert into these tables. Once you have done so, write the following queries:

1. Print the names of professors who work in departments that have fewer than 50 PhD students.
2. Print the name(s) of the student(s) with the lowest GPA.
3. For each Computer Sciences class, print the cno, sectno, and the average GPA of the students enrolled in the class.
4. Print the course names, course numbers and section numbers of all classes with less than six students enrolled in them.
5. Print the name(s) and sid(s) of the student(s) enrolled in the most (highest number of) classes.
6. Print the names of departments that have one or more majors who are under 18 years old.
7. Print the names and majors of students who are taking one of the College Geometry courses. (Hint: You'll need to use the "like" predicate and the string matching character in your query.)
8. For those departments that have no majors taking a College Geometry course, print the department name and the number of PhD students in the department.
9. Print the names of students who are taking both a Computer Sciences course and a Mathematics course.
10. Print the age difference between the oldest and youngest Computer Sciences major(s).
11. For each department that has one or more majors with a GPA under 1.0, print the name of the department and the average GPA of its majors.
12. Print the IDs, names, and GPAs of the students who are currently taking all of the Civil Engineering courses.

Submit a single zip file, via Moodle, containing your SQL file for the above queries, as well as the output log of running these queries on Oracle. As before, all files must be in text-only format.