Intermediate SQL-1

Using the university schema that you have write the following queries. In some cases you might need to insert extra data to show the effect of a particular feature.

Recommendation: With clause is strongly recommended for simplifying the query.

1. Find the sections which have the minimum enrollment among sections registered by students. For each section as such, information displayed should involve:

- Identifier of section(i.e. the primary key for section)
- Course name corresponding to the section
- Enrollment of the section('enrollment' is the alias for the number of students who registered for the section)
- TOP keyword in SQL Server is denied.

2. **USE aggregation on outer join to construct the following query**

For all students, list the registration information of the students. The students who have never registered for any courses should also be considered. In the case, the aggregative information of such students should be set to 0. For each student, information displayed should involve:

- Identifier of student(i.e. the primary key for student)
- Name of the student
- Number of course registrations (Caution: Not the number of section registrations. E.g. , student A registered the course B twice in 2 sections, the number of course registrations is 1 and the number of section registrations is 2).
- Number of section registrations
- TOP keyword in SQL Server is denied.

3. **USE scalar subquery to construct the following query**

Find the information for the instructors who have taught more than 1 course (that is, he/she should have taught 2 distinct courses as least). For each instructor as such, information displayed should involve:

- Identifier of instructor(i.e. the primary key for instructor)
- Name of the instructor
- Average salary of the department for which the instructor works
- Sum of credit points taught by the instructor(for example, if instructor A has taught course A (2 credit points) twice, course B(3 credit points) once, then the sum of credit points taught by instructor A is 7)

4. Find students who have registered for *some but not all* courses taught by instructors of department '拳脚学院'. **Do this using the "not exists ... except ..." structure**. For each student as such, information displayed should involve:

- Identifier of student(i.e. the primary key for student)
- Name of the student
- Number of courses, taught by instructors of department '拳脚学院', registered by the student

5. As query requirement in Q4, Use matching of counts to fulfill the requirement. (don't forget the distinct clause!).