CS1555 / CS2550 Recitation 9

Objective: To practice more SQL queries on Oracle.

Before we start, connect to the server, set the environment variables and get the SQL file to build the database:

1. **ssh <username>@class3.cs.pitt.edu**
2. **source ~panos/1555/bash.env.class3**
3. **cp ~panos/1555/recitation/studentdb.sql studentdb.sql**

Consider the following relation schemas:

Student (SID, Name, Class, Major, SSN)
Student_Dir (SID, Address, Phone)
FK: (SID) → Student (SID)
Course (Course_No, Name, Course_Level)
Course_taken (Course_No, SID, Term, Grade)
FK: (Course_No) → Course (Course_No); (SID) → Student (SID)

Write a SQL query for each of the queries below:

1. (Optional) List the student ID and course number for every student who took a course in Spring 2018 but has not received a grade yet.

2. (Optional) List the SIDs, names *and GPAs* of the students whose GPAs are greater than 3.7. List them in the descending order of the GPAs.

3. (Optional) List the SIDs of all the students and the number of courses they have taken.

4. List the SIDs and names of the students who have not taken the course "Operating Systems".

5. Find the SID(s) of the student(s) who has(have) the highest GPA.

6. Find the top 3 students with the highest GPAs.

7. List the letter grade and the corresponding count in the Course_Taken table. For simplicity, a grade > 3.5 is counted towards 'A'; a grade > 2.5 is counted towards 'B'; all other grades including NULL are counted towards 'C'.