

COMP 2521

Multi-table Queries (includes self Join)

For this exercise you will need to run the SQL script, [NorthWoods_mysql_coursePrereq_working.sql](#) placed on the server, ready for your use. Log on to MySQL and run the following script to create the tables and populate them:

[source ../library/comp2521/NorthWoods_mysql_coursePrereq_working.sql](#)

Now, write SQL to carry out the following queries:

REQUIRED PART:

- 1) Retrieve the student's last names and the last name of their advisor. Make appropriate use of aliases.
- 2) Retrieve the advisor name along with the number of students they are advising.
- 3) Retrieve the last name of faculty members who are scheduled to teach course sections. Show the total maximum enrollment per faculty member.
- 4) Retrieve the course ID and course name of all sections that are scheduled in the course section table and their corresponding maximum enrollment.
 - a) Write the above query using the JOIN keyword with an ON clause.
 - b) Write the above query using the JOIN keyword with the USING clause.
- 5) Now, modify the above query to retrieve the total maximum enrollment per course. For example, "Web-Based Systems" course has 2 sections of 35 students each which makes its total maximum enrollment to 70. Note that the "not a GROUP BY expression" error occurs when you try to display a column that has not been grouped.
- 6) Now, modify the above query to retrieve only those courses that have their total maximum enrollment greater than 200.
- 7) Retrieve the location Id, building code and room of locations that have been scheduled for a course section. Show the number of course sections taking place in each of those locations. Sort the result with location ID. Learn about the ORDER BY clause.
- 8) Retrieve the course name, term description, faculty last name and room of course sections that have been scheduled.

Write an insert statement to add a course section that has not been assigned a location yet. In other words, the loc_id for that record is NULL. Look up on mySQL documentation for the syntax of the INSERT statement.

- 9) Run the previous query. Is the new course section included in your result? Explain your answer; show as a comment in your SQL file.
- 10) Retrieve the course name, and the name of the prerequisite course for those courses that have prerequisites.
- 11) Retrieve the first and last name of all faculty who have the same rank as Kim Cox. Do not show Kim Cox in the result.
- 12) Retrieve all student last names of those that are advised by Sarah Miller's advisor. Do not show Sarah Miller in the result.