Department of Computer Science
New Mexico State University
CS 482/502 Database Management Systems I

Assignment 2: SQL – complicated queries

Task: Given the database schema in Assignment 1, write SQL statements to answer the following queries.

1. (10 points) Find the distinct model that employee 'Tom' specializes in. Show such model Nos.
2. (10 points) Assume that a digital display at a specific site with site code 111 has issues, find all the technical supports who can repair this digital display. Show the employee ids and names of such technical supports.
3. (10 points) Find the information of all the technical supports who can repair at least one digital display with a "Random" scheduler system. You should return the empId and the name for such technical supports.
4. (10 points) Find all the employees including administrators, salesmen, and technical supports. Show the id, name, and gender information of all the employees.
5. (10 points) Find the videos that are shown at site 111, but not site 112. Show the code and length of such videos.
6. (10 points) Find the administrators who manage at least 10 sites. Show such administrators' employee id.
7. (10 points) Find the maximum video length for the videos broadcasted at site 111. Show the maximum video length.
8. (10 points) Find the maximum video length for the videos broadcasted at site 112. Show the information of such videos (video code, video length).
9. (10 points) Find the administrators who manage less than 10 sites. Show such administrators' information (id, name, gender).
10. (10 points, **CS 502 only**) Find the employees who sold packages with the highest commission rate. Show the highest commission rate, and the ids and names of such employees.
11. (10 points) Assume that the number of packages that each salesman sold out is different. Find the salesman who sold more packages than another salesman (i.e., as long as this salesman sold more packages than one salesman, it is fine; This salesman does not need to sell more packages than all the other salesmen.) Show such salesmen's information (id, name).
12. (10 points, **CS 502 only**) Find the technical support who specializes in every model that an employee named 'Tom' specializes in. Show the information (id, name, gender) of such technical supports.

Grading criteria:
- Please use ONE and ONLY ONE SQL statement to answer each question. I.e., to answer each question, if you write multiple small SQL statements, points will be deducted even though the combined multiple SQL statements may answer the question correctly.
- No extra unnecessary tables should be used in each SQL statement. If you use extra unnecessary tables, points will be deducted.
- Please use standard SQL syntax instead of DBMS specific SQL syntax.
- CS 502 students need to answer all the questions.
- CS 482 students do not need to answer questions marked with (CS 502 only) although you have the freedom to work on them. All scores will be scaled to 100. If CS 482 students answer the questions marked with (CS 502 only), you will not have any points deducted if your answers are wrong; you will not get any extra points either if your answers are correct.

Submission: You have to submit your assignment electronically (through Canvas). Printed copies are not accepted. Please submit .pdf file with name "hw-answer-(your banner id)". See course syllabus for policies on late submission and plagiarism.