

COMP2714 - RELATIONAL DATABASE SYSTEMS
Assignment 02 – SQL DML Basics, Joins, Aggregates [Total: 50 marks]
Due at START of your Lab in week Jan 26 (Thu) - Jan 30 (Mon), 2017

You are to work in groups of two. Assignments must be done using Oracle SQL*Plus. Make sure you save all your work in sql script files, and keep backup copies of these scripts!! [Refer to Lab01_sample.sql as illustrative example.]

Assignment submissions must be clearly labeled with identification details, printed black ink on white paper, stapled and submitted to the designated locations; otherwise marks will be deducted. See submission requirement details below.

Coding guideline for ALL assignments: Otherwise 10% of the total marks will be deducted. (READ Lab01_sample.sql)

- UPPER CASE for all SQL reserved words, and Mixed or Lower Cases for names you defined.
- Start each SQL clause on a new line; indent subsequent additional lines of the same SQL clause; avoid use of long lines but appropriately break into multiple lines with indentation; use white space to align code to improve readability.
- Use comments to label your questions if necessary; add notes and explanations where appropriate.
- Use single quotes for character strings and date values, no quotes for numeric values, NULL keyword instead of ''.

Some useful tips:

- Remember to SET ECHO ON in your SQL*Plus environment, so that your script file content will be included in your spool output file. Make sure SPOOL OFF is included near the end of your script file so you will not loose output.
- Check out (on the Internet) some Oracle built-in functions such as TO_DATE, TO_CHAR, TO_NUMBER, and DUAL, String Concatenation, etc. as these may come in handy.

You have to submit BOTH a printed copy and a soft (electronic) copy of the SPOOL output file with file extension .txt (unless otherwise determined by your lab instructor); if either copy is omitted, assignment is deemed NOT submitted:

- For BOTH copies, label each answer clearly with the proper question number; otherwise, 10% of the total marks will be deducted. For queries, include each query result output immediately after each query answer.
- For the printed copy, NO cover page required; include Lastname(s), Firstname(s), student number(s), course number, assignment number and set letter at the beginning as comments (See Lab01 sample). The pages should be STAPLED together, printed with black ink on white paper [no color or grey]. Otherwise, 10% of total marks will be deducted.
- Print with FIXED-size font type like Courier New, with font size 11 or greater. To save printing paper, and if a result set output is too long, you can just keep the first 2 rows and delete the rest of that result set output before printing.
- For the soft copy spool file, submit it to sharein I:\COMP\2714\Day\2<set>\Asn2 where 2<set> is the subfolder for your set. Make sure you submit to the proper subfolder for your set; otherwise, it will be treated as NOT SUBMITTED. Your spool file should be named Asn2<LastName1><Initial>_<LastName2><Initial>.txt for both partners' names.

Given the following database, use a **single** SQL statement to provide the information required by each query question 1 to 10:

(Note: you can run the script Asn2SetupHotels.sql to create the database tables with some sample data; NO need to print this!!)

Hotel (hotelNo, hotelName, hotelAddress)

Room (roomNo, hotelNo, type, price)

Guest (guestNo, guestName, guestAddress)

Booking (hotelNo, guestNo, dateFrom, dateTo, roomNo)

Queries Connolly & Begg 6/e, p.182: (If you have questions, ask instructor early. Do not over-spend your time per question.)

For each question, start with the question statement in the textbook, then combine with additional requirements stated below.

NOTE: Expression to determine if a Booking row contains the current date:

dateFrom <= DATE'2017-01-29' AND (dateTo IS NULL OR dateTo >= Date'2017-01-29')

1. (6.10 - 5 marks) For all hotels in London, list hotel name, hotelAddress, room type and price of all Single, Double or Family rooms with a price below 100.00 per night, in descending order of hotelName, ascending order of price and descending order of type. List each result entry only once.
2. (6.11 - 5 marks) List the Vancouver hotel bookings for which no dateTo has been specified. List the hotelName, hotelAddress, room number, dateFrom and dateTo. Note: Hotels in West and North Vancouver should be excluded.
3. (6.13 - 5 marks) What is the average price of a room for each hotel? List it with the hotelName and in hotelName order.
4. (6.14 - 5 marks) Do this for each hotel and in one single query. List the total revenue with the hotelName, and only if the total revenue is between \$500 to \$1000 [in SQL context]. List in hotelName order.
5. (6.16 - 5 marks) List the type and price of all rooms at the hotels with 'Grosvenor' in name, including the number of rooms for each combination of type and price. List only if the number of rooms for each type and price combination is greater than 3.
6. (6.17 - 5 marks) Include the roomNo in the output. Use 2017-01-29 as the current date.
7. (6.19 - 5 marks) Do this question for each of the hotels with 'Grosvenor' in name. Use 2017-01-29 as current date.
8. (6.19 - 5 marks) What is the total income for each room type from bookings for each hotel (listing hotel names) today? Use 2017-01-29 as today's date. List in ascending order of hotel name and room type.
9. (5 marks) List the new hotels that are still under construction, i.e. no room data in the database as yet for these hotels.
10. (5 marks) What is the percentage of hotels still under construction? List the total number of hotels, number of hotels completed, the number of hotels under construction, and the percentage of hotels under construction. **NO SUBQUERY; use OUTER JOIN.**