

COMP2714 - RELATIONAL DATABASE SYSTEMS
Assignment 03 – SQL DML Subqueries, Aggregates, Views
Due at START of your Lab in week Feb 07 - Feb 09, 2012

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!!

Assignment submissions must be clearly labeled with identification details, 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.

- UPPER CASE for all SQL reserved words, and Mixed or Lower Cases for names you defined.
- Start each SQL clause on a new line; use white space to align code to improve readability.
- Use comments to label your questions, 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:

- SQL script files are just plain text file; use notepad to create and edit them; take a copy of the sample script and modify.
- 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 lose output.
- Check out (on the Internet) some Oracle built-in functions such as TO_DATE, TO_CHAR, TRUNC, DATE calculations, 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 exercise). The pages should be STAPLED together. Otherwise, 10% of total marks will be deducted.
- Print with FIXED-size font type like Courier New, with font size 10 or greater. To save printing paper, and if a result output is too long, you can just keep the first 3 rows and delete the rest of that result output before printing.
- For the soft copy spool file, submit it to share in I:\COMP\2714\Day\Asn3\2<set> 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 Asn3_<LastName><FirstInitial>.txt. Include both partners' names.

Consider the following database. Using SQL, provide the information required by each of the following queries.

(Note: you can run the supplied script Asn3SetupHotels.sql to create the database tables with some sample data)

Hotel (hotelNo, hotelName, hotelAddress)
Room (roomNo, hotelNo, type, price)
Guest (guestNo, guestName, guestAddress)
Booking (hotelNo, guestNo, dateFrom, dateTo, roomNo)

Queries Connolly & Begg 5/e, p.172: (If you have questions, ask your instructors early. Do not over-spend your time.

Practice a systematic problem solving approach as demonstrated in the lectures.)

1. (6.13 - 5 marks) What is the average price of a room in London? .a) Do this using JOIN, b) Do this using subquery.
2. (6.15 - 5 marks) Use the month of 2012-02 instead of August, and do the query for each hotel:
i.e. How many different guests have made bookings for 2012-02 for each hotel?
3. (6.18 - 5 marks) Use 2012-02-01 as today's date. List in roomNo order.
4. (6.20 - 5 marks) Use 2012-02-01 as today's date. Use NOT IN to solve this query. List in roomNo order.
5. (6.20 - 5 marks) Use 2012-02-01 as today's date. Use NOT EXISTS to solve this query. List in roomNo order.
6. (6.20 - 5 marks) Use 2012-02-01 as today's date. Use LEFT JOIN to solve this query. List in roomNo order.
7. (6.20 - 5 marks) Use 2012-02-01 as today's date. Use MINUS to solve this query. List in roomNo order.
8. (6.24 - 5 marks) Use the month of 2012-02 instead of August.
9. (6.26 - 5 marks) Use 2012-02-01 as today's date. List hotelNo, hotelName and LostIncome, in hotelNo order.
10. (7.14 - 5 marks, p.210) Use 2012-02-01 as today, and guestAccount as view name. [The account info for each guest means: Room (roomNo), Name (guestName), Check-in (dateFrom), Check-out (dateTo), Rate (room price), #Days (calculate from dateTo and dateFrom), and Total (calculate from dateTo, dateFrom and price).] Add a query to test the view.
0. (7.16 - Optional practice question on DCL data control language)

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

dateFrom <= DATE'2012-02-01' AND (dateTo IS NULL OR dateTo >= Date'2012-02-01')

Total: 50 marks