COSC 344
Lab for Week 6

Overview

The purpose of this lab is to get you familiar with more advanced SQL commands.

Executing Queries

Below is a set of seven query statements. The numbering of the queries continues from the last lab. Work out the SQL query to get the desired results. The correct results are shown in the section "Query Results", at the end of this document so you can check your queries. If you get stuck, ask for help.

[Important] Put each query in a separate file called q##.sql where ## is the query number.

18. Using a correlated subquery, list the names and numbers of all salespeople with more than one customer.

19. Using a correlated subquery that correlates the orders table with itself, list the orders with above average amounts for the particular customer. Look at the output to help understand what is desired.

20. Use a correlated subquery and EXISTS to find the employees who have no dependents.

21. First type the following lines to add two rows into the database:

```
INSERT INTO department VALUES
  ('TempDept', 6, 123456789,
   TO_DATE('18-Jul-2002', 'DD-MON-YYYY'));
INSERT INTO project VALUES
  ('TempProject', 50, 'Houston', 6);
```

Now use a UNION to list all project numbers of projects that involve Smith as either a worker or as a manager of the department that controls the project. HINT: Union two queries: one that retrieves projects that involve Smith as a worker; one that retrieves projects that involve Smith as manager of the department that controls the project.

22. Give everybody except Borg (he makes too much anyway ☺) a 10% pay raise. After you do this, select lname, salary to verify it worked properly. If not, reload the company script and try again.

23. Create a new table like the employee table that has only the workers who live in Houston. Create the table with the appropriate columns and data type and populate it using a single SQL command. After the table is created, do a

    SELECT * FROM hou_emp

    to verify your results.

24. Create a new table called emp_dep. Its attributes consist of the first and last name of employees, and the names, sex and birthdates of the employees dependents. Create this table in a single SQL statement by selecting appropriate data from existing tables. After the table is created, do a

    SELECT * FROM emp_dep

    to verify your results.

Query Results

```
18. 1001  Peel
    1002  Serres

19. 3006  1098.16  03-OCT-90  2008  1007
    3010  1309.95  06-OCT-90  2004  1002
    3011  9891.88  06-OCT-90  2006  1001

20. Alicia Zelaya
    Ramesh Narayan
    Joyce  English
    Ahmad  Jabbar
    James  Borg

21.   1
```

```
      2
     50
```

```
22. Smith      33000
    Wong       44000
    Zelaya     27500
    Wallace    47300
    Narayan    41800
    English    27500
    Jabbar     27500
    Borg       55000
```

23. Your result should include only Smith, Wong, English, Jabbar and Borg. Otherwise it should look like the *employee* table. The value of the salary attribute will depend upon whether you have reloaded the tables after giving the 10% pay raise.

```
24. Franklin   Wong      Alice          F 05-APR-86
    Franklin   Wong      Theodore  M 25-OCT-83
    Franklin   Wong      Joy       F 03-MAY-58
    Jennifer   Wallace   Abner          M 28-FEB-42
    John       Smith          Michael   M 04-JAN-88
    John       Smith          Alice          F 30-DEC-88
    John       Smith          Elizabeth F 05-MAY-67
```

Assessment: 14 marks, due at 5pm on April 13

Query 18 to Query 24 will be assessed.
If you saved the statement for each query in a separated file named "q##.sql", you can use the following command to concatenate the 7 queries into one file:

```
cat  q??.sql > Lab6.sql
```

Record an Oracle session using SQL spool with the following commands at the SQL> prompt.

```
SQL> spool Lab6;
SQL> @Lab6.sql
SQL> spool off;
```

A file named Lab6.lst will be created. Submit `Lab6.sql and Lab6.lst` in Blackboard.