COSC265 Lab 3: Complex retrievals and updates in SQL

Aim: At the end of this lab you should be able to specify complex queries, perform updates and create views in the context of Oracle RDBMS.

Required Preparation: Before coming to the lab, prepare your statements on paper.

Queries for the MOVIES database

1. Find names of stars who acted in movies directed by Sofia Coppola.
2. Find names of stars who acted in at least two movies directed by Sofia Coppola.
3. Show types of movies for which there are more than 5 movies in the database. Order the results by decreasing number of movies.
4. Find the names of all directors who directed at least as many movies as the director number 15.
5. Find the director who has directed most dramas.

Tasks for the REGISTRATION database

1. Get full details of all vehicles which were registered during July 2011.
2. Get the list of vehicles imported from Japan since 1985 which had been registered less than 3 times in New Zealand, listing their plates, makes and models.
3. Find the names of people who own more than one vehicle.
4. Write SQL statements to update the REGISTRATION database in the following cases:
    a. Anna Simmons has had her VW golf painted in green.
    b. Write the INSERT statement to add a new registration for the car with plates number TX9283. The car was registered on July 1, 2011 by employee 21321322 who works for registration organization 1352. The DRR reading on the day was 169654 kilometers, and the cost was $137.85.
    c. Delete all registrations for vehicle TX9283.
5. Create a copy of the employee table using the following statement:

    ```
    create table employee as select * from tanja.employee;
    ```

    Next, create a view EMPS using your copy of the EMPLOYEE table. Try to change the birthdate of some employee. Does this succeed? If so, does the change propagate to the underlying EMPLOYEE table?
6. Create a view which contains the plates, make and model of each vehicle, and the number of times it has been registered. Using this view, find vehicles that have been registered at least three times. Try deleting information about a specific vehicle. Discuss what happens with DML statements when performed on views. Check what happens both to the view and the base table(s) on which the view is defined.
7. Create an index IYEAR on the YEAR attribute of the VEHICLE table. Consider other candidates for indexing.