

COSC265 Lab 4: Constraints and Triggers

Aim: At the end of this lab you should be able to specify semantic constraints and triggers in the context of Oracle RDBMS.

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

The tasks:

1. Design two attribute and two table constraints for the REGISTRATION database. For example, you may define a constraint on the REGISTRATION table which specifies that the cost of registration has to be over \$50. Alter the table(s) and demonstrate the operation of constraints you created.
2. Create the OWNER2 table, which contains the id and name of each car owner, and the total number of vehicles owned by him/her.
 - a. Define a trigger that will modify the OWNER2 table in the case when a new owner is added for a car (i.e. insertion to the OWNS table).
 - b. Demonstrate the operation of your trigger on a few examples.
3. Create a multitable view MULTIREG, which contains the number of a registration organization, the name of its manager and the number of employees working in it. To do this, first create a copy of the *tanja.reg_org* table, as follows:

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

Then use your REG_ORG and EMPLOYEE tables to create the MULTIREG view.

- a. Is it possible to update the MULTIREG view directly? Write an UPDATE on the view for the case when John Right becomes the manager of the registration organization number 1303.
- b. Define a trigger that will update all the underlying tables in the case of an UPDATE statement being run on the view that changes the name of the manager of the registration organization whose number is given. You may assume that the data about the new manager already exists in the EMPLOYEE table.
- c. Demonstrate the operation of your trigger when John Right becomes the manager of the registration organization number 1303.