Introduction to Databases, ITU, Fall 2004

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Exercises on October 29

You are unlikely to be able to do all the exercises in two hours. Therefore you are encouraged to prepare at home, and use the exercises for those parts you find difficult.

1. GUW 7.1.5 and 7.1.6 (p. 326-327). As a starting point use the schema definitions from www.itu.dk/people/pagh/IDB04/data/. Enter your new schema definition in Oracle, and perform tests (insertion and deletion of tuples) to see that the constraints are maintained.

2. GUW 7.2.6 (p. 333). Add the constraints to your schema from the previous exercise using `ALTER TABLE ... ADD CONSTRAINT ...`

3. Write triggers for GUW 7.4.3 a), b) (p. 346). Enter and test the triggers in Oracle. Remember to put a semicolon in front of references to the old and new row variables. You will get a "table is mutating" error if you try to modify a relation in the action part of a normal trigger on that relation, since this is not allowed by Oracle. In particular, b) should be done using an `INSTEAD OF` trigger. If there are compilation errors in the action part type `show errors` to display the error message (but don't trust the line number mentioned).

4. Explain and test the effect of using the cascade policy instead of the set-null policy in GUW 7.1.6.

5. GUW 7.4.3 f). For this problem you may need the syntax:
   `IF <condition> THEN <statements> END IF;`
   This means that `<statements>` are executed if and only if `<condition>` is true.

To be handed in no later than November 5, 1 PM:

- Problem 5 from the exam, January 2004, available on the course home page under "useful links", or directly at: http://www.itu.dk/people/pagh/IDB04/exam.pdf, **and**

- Problem 4 from the trial exam, December 2003, available on the course home page under "useful links", or directly at: http://www.itu.dk/people/pagh/IDB04/trialexam.pdf

As always, your hand-in must be completed individually.