Introduction to Databases, ITU, Fall 2004

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Exercises on September 24

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 2.1.3, GUW 2.3.1.b). Convert the final E/R diagram to a relational database schema.

2. In last week's lecture we considered the badly designed E/R diagram of Figure 2.14 on page 45 of GUW, and came up with a simpler, alternative E/R diagram. Convert both E/R diagrams into relational database schemas according to the method of GUW. Then consider, for each database schema, how to write each of the following queries in SQL:

   (a) Find the address(es) of the owner(s) of account number 123456.
   (b) Find the balance of every account of "D. Duck".
   (c) Find the names of every pair of customers having a common account.

   What effect does the bad design have on the queries?

3. GUW 2.1.8. Convert the final E/R diagram to a relational database schema.

4. GUW 2.2.3.

5. GUW 2.4.4. Convert the E/R diagrams to relational database schemas.

To be handed in no later than Friday October 1, at 1 PM:

Problem 1 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`

Note that the hand-in must be completed individually.