

# Introduction to Databases, ITU, Fall 2005

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## Exercises on September 12

1. GUW 2.1.3.
2. Gradiance “homework” on E/R modeling. Note that this is **not** a hand-in. You may try the homework as many times as you like. You should strive to be able to get all questions right (if not before, then when studying for the exam).
3. GUW 2.1.8. Convert the final E/R diagram to a relational database schema.
4. GUW 2.4.4. Convert the E/R diagrams to relational database schemas.
5. In the 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?