



Exercise Sheet I: Introduction to Databases (until Thursday, 26.10.2017)

Please note: you need **50%** of all exercise points to receive the *Studienleistung* for this lecture. In order to pass the RDB I Module, you need both the *Studienleistung* **and** you need to pass the exam. Exercises have to be turned in until **Thursday before the lecture** either in the lecture hall or into our red mailbox (Informatikzentrum 2nd floor). Please do not forget your **Matrikelnummer** and your **tutorial group number** on your solutions. **If you forget** to write your Matrikelnummer and/or your tutorial group number, you get **automatically 0 points**. Your solutions may be in German or English. Unless otherwise specified: **Always use your own words!**

Exercise 1.1 – Basics (10 points)

- a) What is a *database*? (2 Points)
- b) What is a *database management system* (2 Points)?
- c) Are the following features provided by a file system, a database, or both (2 Points)?
 - i. Simple and fast data access
 - ii. Controlled redundancy
 - iii. Sophisticated enforcements of standards
 - iv. Backup and recovery
- d) Give an example of a scenario, where a *database management system* might be useful and briefly explain why do you think it might be useful here (2 Points)
- e) Which user groups interact with a running DBMS(2 Points)

Exercise 1.2 – Database characteristics (8 points)

Briefly define the following terms

- a) *Declarative Querying* (3 Points)
- b) *View* (3 Points)
- c) *Transactions* (2 Points)