

Exercise Sheet I: Introduction to Databases (until Thursday, 27.10.2016)

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 mailbox (Informatikzentrum 2nd floor). Please do not forget your **Matrikelnummer** and your **tutorial group number** on your solutions. Your solutions may be in German or English. Unless otherwise specified: **Always use your own words!**

Exercise 1.1 - HMS (5 points)

Visit our Homework Management System (HMS) at <https://is64.idb.cs.tu-bs.de:8181/ifis-hms/> and

- Log-in**, using your **y-number**
- Sign in** for this lecture (*Relational Database Systems I, WiSe 16/17*)

This will make grading and managing your homework submissions a lot easier, both for you and us! (We are currently working on getting a valid SSL certificate – so you should ignore your browsers complaints for now.)

Exercise 1.2 – Basics (8 points)

- What is a *database*? (2 Points)
- What is a *database management system* (2 Points)?
- Explain the differences between a *database* and a *file system* (2 Points)?
- 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)

Exercise 1.3 – Redundancy (3 points)

What does *redundancy* mean? And what are the two main disadvantages of redundancy?

Exercise 1.4 – Database characteristics (6 points)

Briefly define the following terms

- Declarative Querying* (3 Points)
- View* (3 Points)