

Database Technology Organization



Hello

- Prof. Dr. Heiko Paulheim
- Chair of Data Science
- Research Interests:
 - Semantic Web and Linked Open Data
 - Data Mining with Linked Open Data
 - Ontology Matching
 - Data Quality and Data Cleaning
 - Outlier Detection
- Room: B6 – C1.09
- Consultation: by appointment
- Heiko will teach the lectures



Hello

- Sven Hertling
- Ph.D. Student
- Research Interests:
 - Semantic Technologies / Semantic Web
 - Linked Data
 - Knowledge Graphs
- Room: B6 – C1.03
- Consultation: by appointment
- Sven will teach the exercises



Introduction and Course Outline

- Administration
- Introduction
 - Concept and (brief) history of relational databases
 - Introduction to the relational model

Course Organization

- Lecture
 - Database concepts
 - Theory of relational algebra, relational modeling, query processing
 - Introduction to SQL
- Exercise
 - Creating example databases
 - Hands-on experience
- Final exam

Course Contents and Schedule

- Today: Introduction
- 21.+28.2.: SQL
- 7.3.: ER Models
- 14.3.: Normal Forms
- 21.3.: Indexing and Hashing
- *Easter Break*
- 11.4.: Database Architectures
- 18.4.: Query Processing
- 25.4.: Query Optimization
- 2.5.: Transactions and Concurrency
- 9.5.: Recovery
- 16.5.: Advanced Datatypes, Application Development
- 23.5.: Application Development & Architectures

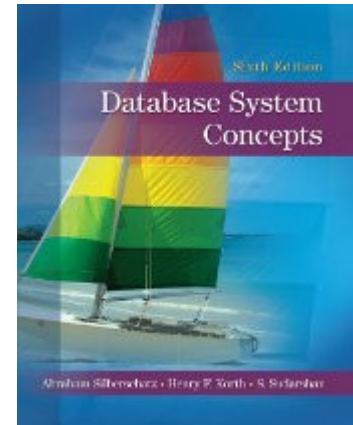
you'll get a larger
exercise assignment here

Course Organization

- Lecture Webpage: Slides, Announcements, Web Links
 - <http://dws.informatik.uni-mannheim.de/en/teaching/courses-for-master-candidates/cs-460-database-technology/>
 - hint: look at version tags!
- Additional Material
 - ILIAS eLearning System, <https://ilias.uni-mannheim.de/>
- Time and Location
 - Lecture: Wednesday, 12.00 – 13.30, Room B6 A1.04
 - Exercise: Wednesday, 13.45 – 15.15, Room B6 A1.04

Material and Sources

- This course (and the majority of the slides) are based on the book
 - Silberschatz et al.: Database System Concepts
- Several copies are available in the library
- Additional material online
 - www.db-book.com



Questions?

