

Database Technology Organization



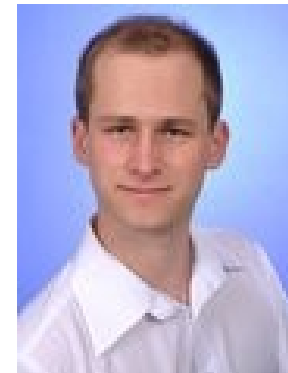
Hello

- Prof. Dr. Heiko Paulheim
- Chair of Data Science
- Research Interests:
 - Knowledge Graphs on the Web and their Applications
 - Data Quality and Data Cleaning on Knowledge Graphs
 - Machine Learning and Data Mining on Linked Data
- Room: B6 – B.022
- Consultation: Tuesdays, 9-10 am
 - Please make an appointment w/ Ms. Lermer upfront
- Heiko will teach the lectures



Hello

- Sven Hertling
- Ph.D. Student
- Research Interests:
 - Semantic Technologies / Semantic Web
 - Linked Data
 - Knowledge Graphs
- Room: B6 – B0.01
- 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
- 19.2.+26.2.: SQL
- 4.3.: SQL Bootcamp (Exercise only)
- 11.3.: ER Models
- 18.3.: Normal Forms
- 25.3.: Indexing and Hashing
- 1.4.: Database Architectures
- 8.4. & 15.4. *Easter Break*
- 22.4.: Query Processing
- 29.4.: Query Optimization
- 6.5.: Transactions and Concurrency
- 13.5.: Recovery
- 20.5.: Application Development
- 27.5. Wrap up and Q&A (Exercise only)

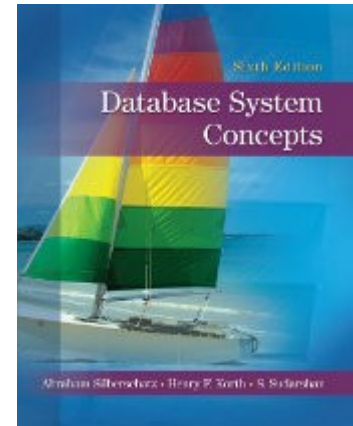
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eggexercise assignment here

Course Organization

- Lecture Webpage: Slides, Announcements, Web Links
 - <https://www.uni-mannheim.de/dws/teaching/course-details/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?

