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

• 16.2.: Introduction
• 23.2+2.3.: SQL
• 9.3.: ER Models
• 16.3.: Normal Forms
• 23.3.: Index and Hashing
• 30.3.: DB Architectures
• 6.4.: Query Processing
• 13.4.: Easter Break
• 20.4.: Easter Break
• 27.4.: Query Optimization
• 4.5.: Transactions and Concurrency
• 11.5.: Recovery
• 18.5.: Application Development

you’ll get a larger eggxercise 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

• Time and Location
  – Lecture: Wednesday, 12.00 – 13.30, B6 A104 (as of today)
  – Exercise: Wednesday, 13.45 – 15.15, B6 A104 (as of today)

• Remote teaching
  – For those who can’t be there, we provide video recordings in ILIAS (from last year, but they are widely identical)
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?