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 (currently mostly working from home)
• 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 (currently mostly working from home)
- 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
• 10.-17.3. SQL Part 1+2
• 24.3. ER Models
• 31.3.-7.4. Easter Break
• 14.4. Normal Forms
• 21.4. Index and Hashing
• 28.4. DB Architectures
• 5.5. Query Processing
• 12.5. Query Optimization
• 19.5. Transactions and Concurrency
• 26.5. Recovery
• 2.6. Application Development
• 9.6. Wrap up and Q&A

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, Zoom
  – Exercise: Wednesday, 13.45 – 15.15, Zoom

• Remote teaching
  – please use Portal2 to retrieve the links, bookmarking is discouraged
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?