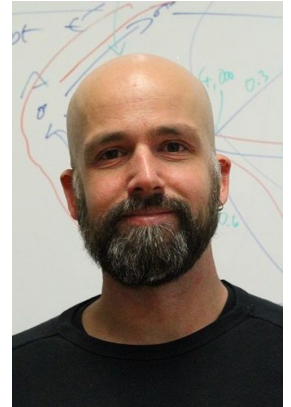


Database Technology Organization



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
 - Using Knowledge Graphs in Data Mining
 - Societal Impact of Artificial Intelligence
- Room: B6 – B.022
- Consultation: Tuesdays, 9-10 am
 - Please make an appointment w/ Ms. Lermer upfront
- Heiko will teach the lectures



Hello

- Tommaso Green
- Ph.D. Student
- Research Interests:
 - Natural Language Processing
 - Cross- and multilingual representation learning
- Contact: tommaso.green@uni-mannheim.de
- Consultation: by appointment
- Tommaso 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

Date	Lecture	Exercise
14.2.	Introduction	Introduction
21.2.	SQL Part 1	SQL Part 1
28.2.	SQL Part 2	SQL Part 2
6.3.	ER Models (<i>Video</i>)	ER Models
13.3.	Normal Forms	Normal Forms
20.3.	Index and Hashing	Index and Hashing + Intro Easter Eggcercise
27.3.	<i>Easter Break</i>	<i>Easter Break</i>
3.4.	<i>Easter Break</i>	<i>Easter Break</i>
10.4.	DB Architectures	DB Architectures
17.4.	Query Processing	Query Processing
24.4.	Query Optimization	Query Optimization
1.5.	<i>Holiday</i>	<i>Holiday</i>
8.5.	Transactions and Concurrency	Transactions and Concurrency
15.5.	Recovery	Recovery
22.5.	Application Development	Application Development

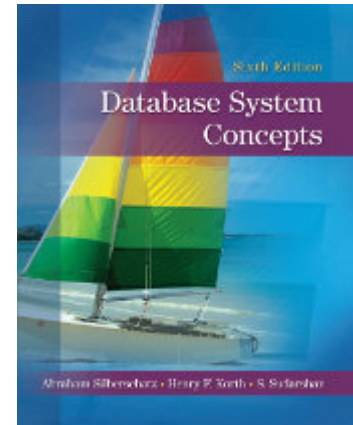
you'll get a larger
eggxcercise assignment here

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, B6 A104
 - Exercise: Wednesday, 13.45 – 15.15, B6 A104
- Remote teaching
 - For those who can't be there, we provide video recordings in ILIAS (from 2021, 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?

