Databases

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Agenda Items

Lecture:

- Tuesday 11:00–12:45
- Thursday 13:30 - 15:15

Exercise classes and questions/answers:

- Monday 15:30–17:15
- Wednesday 11:00-12:45
- **First exercise class on 15th of April!**

Office hours:

- Tuesday 13:30–14:30 in T-437

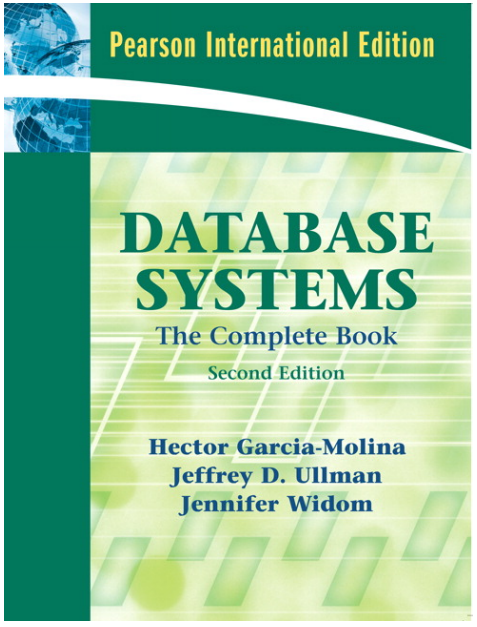
If you have questions:

- Ask questions in the exercise classes, or office hours.
- **Emails will be answered very slowly!**

Final exam on 28th of May (check rooster before exam)

Check rooms on vurooster, they change from week to week.

Course Book



Database Systems, The Complete Book

by Hector Garcia-Molina, Jeffrey D. Ullman and Jennifer Widom

2008 edition (second edition)

Basics

Overall Goal

Thorough understanding of database concepts

- from a user perspective
  (not how databases work internally)

Learning Goals

- Developing data models
- Reasoning about good/bad design
  (functional depencencies)
- Understanding and writing non-trivial SQL statements
- Basic knowledge of database programming

Course Ingredients

Homework:

- 1 written homework (groups of two)
- 3 online homework assignments (individual)

You need

70% of the homework points to qualify for the exam!

90% of the homework points for 0.5 bonus points.

Final exam:

- The material covers everything from the lecture, homework and exercise classes.

Final grade:

- The **exam grade** plus possibly **0.5 bonus points**.

Lecture Overview

- Lecture 1: Introduction and **Relational Model**
- Lecture 2,3: **Data Modelling**
  - modelling a scenario in E/R and UML
- Lecture 4,5,6: **Advanced SQL**
  - writing nested queries with joins
- Lecture 7,8: **Functional Dependencies**
  - normalising a database schema
- Lecture 9,10: **Transactions**
  - analysing transaction schedules
- Lecture 11: **Database APIs**

How to pass this course?

How to pass this course?

- You must acquire some abilities.
  - can only be learned by doing
  - work actively on the homework assignments
- You must acquire basic knowledge and reason about it.
  - prepare by **reading the book** before every lecture
  - ask questions in class, labs or office hours

Why you need this course

Storing data is important everywhere in industry.

The skills you acquire here are useful for your entire career.