

# Database Management Systems

(COP 5725)

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These notes are a summary of all slides which are shown and explained in the course of the lecture. Please note that these slides do not at all replace the study of the relevant literature, but are only considered as a guidance towards the lecture.

# Preliminaries

- ❑ COP 5725 course web page

[http://www.cise.ufl.edu/~mschneid/Teaching/COP5725\\_Fall2008/COP5725\\_Fall2008.html](http://www.cise.ufl.edu/~mschneid/Teaching/COP5725_Fall2008/COP5725_Fall2008.html)

- ❑ Syllabus on COP 5725 course web page

[http://www.cise.ufl.edu/~mschneid/Teaching/COP5725\\_Fall2008/Syllabus.pdf](http://www.cise.ufl.edu/~mschneid/Teaching/COP5725_Fall2008/Syllabus.pdf)

- ❑ Apply for an Oracle account as fast as possible.

- ❑ In which situation should you ask whom for advice?

- lecture, homework, and project questions: me and the TAs
- Oracle contents questions: TAs
- Oracle system questions: [consult@cise.ufl.edu](mailto:consult@cise.ufl.edu) (system administrators)

- ❑ My messages to the class are communicated by a class mailing list.

- ❑ Some remarks with respect to the class project (contents, team formation, ...).

- ❑ Your questions ...

## What I expect from you ...

- Read the syllabus.
- Attend the class regularly.
- Study and learn the material presented in the class *and* in the reference book.
- Learn also explanations and definitions given in mathematical terms.
- Perform well in the exams.
- Do the homework (alone).
- Do the software project (in a team).
- Don't cheat.

## What you should have learned after this lecture ...

- ❑ the structure of this class
- ❑ why file systems are inappropriate in many ways and for many applications

# Structure

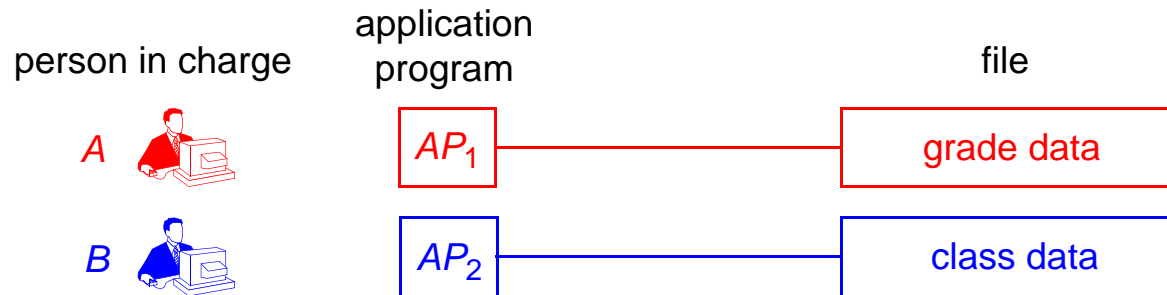
1. Introduction
2. Database Management: Handling Tables
3. Conceptual Data Modeling
4. Relational Data Model
5. Design Theory for Relational Databases
6. SQL – The Standard for Relational Database Languages
7. Other Relational Database Languages
8. Application Programming
9. Object Relational Databases
10. SQL 3

# 1. Introduction

## 1.1 Traditional Data Management Using File Systems

A time when there were no database systems ...

□ scenario „university administration“



□ assumptions

- files contain the last name, the first name, the registration number and the address of a student
- grade data additionally include the results of oral exams, written exams, seminars, etc.
- class data additionally comprise the taken classes of each student