Implementation of Databases
Winter Semester 2007/2008

Prof. Dr. M. Jarke  (Start: 23rd of October)
Dr. Ch. Quix
M. A. Chatti, X. Li  (Start: 24th of October)

Lecture  Tue. 11:45-13:15  AH I
Thu. 11:45-13:15  AH I

Exercises  Wed. 12:15-13:45  AH III

Outline

Database system architecture
- Aims and tasks of a DBMS
- Basis architecture of a DBMS
- Transactional DBMS
- Distributed database architectures

Query and DML processing
- Introductory query processing example
- Representation of queries
- Query plans
- Update processing

Transaction control
- Transactions in the read-write model
- Serializability of schedules
- Fault tolerance of schedules
- Concurrency control protocols
- Recovery protocols

Administration of databases
- Basic principles
- Transaction manager tuning
- Tuning by indices

(Current chapters of database implementation)

Organization

- Script:
  - Course material can be downloaded from the lecture Website
    (Login: idb0708; Password: BStarTree).
  - Handouts can be purchased for 3€ in the introductory lecture on
    October 23.

- Certificate conditions:
  1. At least 8 of 11 exercises handed in
  2. At least 50% of all exercises is processed reasonably

  + Written examination at the end of semester

Exercises

- Wednesday, 12:15-13:45, AH III  (start: 24th of October, 2007)

- Organization of exercises
  - Exercises can be worked and turned in by groups of three people max.
  - Single students should work together!
  - Handouts Wednesday in exercise
  - Due Wednesday before exercise (exceptions indicated on handout)

- Contact:
  - Mohamed Amine Chatti, Tel: 0241/80-21510, Room 6233,
    chatti@cs.rwth-aachen.de
  - Xiang Li, Tel: 0241/80-21516, Room 6239,
    lixiang@cs.rwth-aachen.de

- Information / Material:
  - http://www-i5.informatik.rwth-aachen.de/lehrstuhl/lehre/IDB07-08/
Time Schedule

- Lectures and exercises on regular basis, except:
  - Thursday, 1st November (public holiday)
  - Tuesday, 6th November ("Fachschaftsvollversammlungen")
  - Wednesday, 7th November (No lecture hall available)
  - Thursday, 20th December 2007 till Friday, 4th January 2008 (Christmas Holidays)

Literature