Implementation of Databases

Winter Semester 2008/2009

Outline

• Architecture of Database Systems
  – Aims and Tasks of a DBMS
  – Basic Architecture of a DBMS
  – Transactions in a DBMS

• Implementation and Optimization of Relational Databases
  – Access planning
  – Implementation of Relational Operators
  – Query processing
  – Query optimization
  – Views and Indexes

Outline (2)

• Deductive Databases and Integrity Checking
  – Basic Principles of Deductive Database
  – Query Evaluation
  – Integrity Checking
  – Containment and Equivalence of Queries

• Databases Systems and the Internet
  – Architectures of Distributed Database Systems
  – Storage Structures for XML
  – Query Processing for XML
  – Information Integration
  – Data Warehouses
  – Peer Data Management
  – Search Engines
  – Data Streams

Organization

• Lecture Notes
  – Course material can be downloaded from the l2p system, a page for the course has been created
  – Vouchers for printed handouts can be purchased for 3€ in the introductory lecture on October 16.

• Exams / Certificates:
  – Exercises
    • At least 9 of 12 exercises handed in
    • Score at least 50% of all exercises
  – Written examination at the end of semester
    • Successful participation in exercises is a prerequisite for participating in the exam
    • Tuesday, February 10, 2009, 9am, AH IV
    • Bonus: Grade increased by 0.3 or 0.4 if student score at least 70% in exercises
Exercises


- 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
  - Stefan Hirschmeier, Tel: 0241/80-21533, Room 6212, Stefan.Hirschmeier@fit.fraunhofer.de

- Information / Material:
  - http://www-i5.informatik.rwth-aachen.de/lehrstuhl/lehre/IDB08-09/

Time Schedule

- Lectures and exercises on regular basis, except:

  - Thursday, December 23, 2008, till Friday, January 2, 2008 (Christmas Holidays)

Literature
(Ordered by Relevance)