Mini-Project, Exam, Etc

ITEV DBMS – 1st Seminar, Sep. 6, 2008

Original slides are from

Silberschatz, Korth and Sudarshan

Mini Project

- **The basis for the oral exam**
    - To provide a realistic running example
    - To use in practice, the major topics covered by the course
    - To get "hands-on" experiences
    - To use a DBMS and related software tools
- **Group work is highly preferred**
    - Bring your own problems
    - Find your common interests
    - Each group works on a specific topic
    - Each group better have a "head" or "correspondent" for management purpose

Project Supervision

- Lunch time in seminars
  - Try to spend time evenly per capita, so a big group will have more face-to-face consultation time
- Emails
  - Each week, I will mail to all querying on progress, reminding what to read/do
  - You are supposed to feedback on group base
- Phones
- One hour skype meeting each week *can* be carried out
  - Initiated by your feeling of necessity
  - For all students who want to be in (not just for a single group)
  - All groups should coordinate with each other to arrange such a meeting

- Limited supervision time! Therefore, get some peers to work with!

Group Formation

- It is a very good idea to create groups of 2-4
  - Makes it possible to discuss
  - One-person groups has no technical exchange of ideas
- Report the groups to me by the next Monday (Sept. 8)
  - It is of course more welcome by today
  - With project topic if possible
- Groups can NOT be changed once formed

Project Product

- Project product: a report from each group
  - The mini project is be documented in a report of 10-20 pages
  - All source code must be handed in either on CD-ROM (or equivalent that will not be returned) or via email.
  - You can NOT take the exam without having handed in the mini project
  - The mini project must be handed in as a pdf file and email to me.
    - Welcome to send a hard copy in addition by mail .

- Report submission deadline
  - October 16, 2008 at 14.00
  - No report by deadline, no exam on the final day!

Ideal Project Topics

- Takes an outset in the companies in which you work

- Solves an independent real-world problem

- Has an appropriate size

- Can be used by you after the course

- In case you cannot find a topic for your own group, 2 alternative topics will be offered

- An important principle for the mini project
  - Think big and make simplifying assumptions as the project progresses!

Mini Project Topic One

- Choose from offered topics ONLY IF you cannot work out your own

- Cinema ticketing system
  - You as a cinema runner plan to build up a computer based ticketing system.
  - Each movie session planned is available in the system for tickets selling and seat reservation.
  - Tickets are allowed to be refunded unless they are overdue.
  - Audience are allowed to make reservations for a movie they are interested in.
  - Reservations can be viewed, modified or even deleted.
  - Complex situations
    - E.g., cancellation of a movie session already reserved
  - Create such a service by design a reliable database.

Mini Project Topic Two

■ Choose from offered topics ONLY IF you cannot work out your own

■ Cheap air ticket service

- You open a company to offer cheap air tickets. Your company maintains a local database which stores all cheap air tickets you have get from airlines.

- Your employees can input/modify/delete/view cheap air flight information in the database.

- Your clients can view/book/change/cancel cheap air flights based on that database.

- Create such a service by design a reliable database.

Possible Outline of The Mini Project

- Introduction
  - Description of the problem
- Entity-Relationship Diagram (ER Diagram, ERD)
  - Presentation of the ERD
  - Integrity constraints
  - Design choices and limitations
  - Mapping of diagrams to tables
- Logical and Physical Database Design
  - Argue why this is a good database design
  - How are the tables stored which additional indexes
  - Central SQL DDL statements
- Transaction Design
  - List and explain central queries, including their query plan
  - Explain the query plan for critical queries

Status Report of Mini Projects

- In the next two seminars, each group must give a short presentation on their project status
    - Half hour will be used for that on each day
- September 13, 2008
    - Group formation
    - Member background and interests
    - Finalized topic
    - Plans
    - …
- October 4, 2008
    - Report more progress

Tools for Mini Project

- Oracle Database 10g Express Edition
  - http://www.oracle.com/technology/software/products/database/xe/index.html
- Oracle SQL Developer
  - http://www.oracle.com/technology/software/products/sql/index.html
- For drawing ER diagram you may use Dia
  - http://www.gnome.org/projects/dia/

- These tools are "recommended".

- Demo of Tools

An Assignment

- Build the Video Store example database in the Conceptual Design slides
  - Create all tables
  - Specify relevant primary/foreign keys
  - Pick one table, delete it and recreate it
  - Pick another table, modify its schema
  - SQL statement and/or manual creation
  - …
- Add some data to the database
- Try out some queries we used in the SQL slides
- Create some new queries that were not used in our slides

Exam

- 30 minutes individual oral exam
  - No preparation
- Reference to your mini project
  - But the grade is not given based on the mini project
- Danish 7-point grading scale
- The format is similar to other exams at IT-Vest
- Censor will be a guy from Aalborg University

Preparation for Exam

- Prepare 12-15 minutes of talk, we will interrupt you
  - Use the blackboard
  - Use small and good examples
  - Go for the "beef", ignore the less important
  - Own notes cannot be used!
  - Feel free to discuss material related to another question
- More details will be announced on day 3
  - Censor name
  - Draft questions

A Small Questionnaire

- Please finish it before leaving
- Thanks for your efforts!

End of Mini-Project, Exam, Etc

ITEV DBMS – 1st Seminar, Sep. 6, 2008

Original slides are from

Silberschatz, Korth and Sudarshan