CSE355 Database Systems

Term Project

Step 1: Proposal → ***Due: 23.10.2013. 17:00***

- Determine a practical (applicable to real business) database project that you want to implement. Specify the scope of your project. Give a name to your project.
- You can study in groups. At most two members are allowed in a group.
- Submit a report (max 1 page A4) and take the approval of your lab instructor before beginning to study on your project.
  - You may take the approval via office hours or e-mail.

Step 2: Requirement analysis / Conceptual database design → ***Due: 10.11.2013. 23:59***

- Submit a report (2-3 pages A4) that contains data and requirement analysis of your database.
  - Attach the documents that you have collected from the company.
- Create a diagram (with E/R studio or a similar product) that shows the entities, attributes and relationships in your database using Entity-Relationship Model.
  - The diagram should obey the rules of Entity-Relationship drawing conventions.
  - Attach your ER diagram.

Step 3: Requirement analysis / Conceptual database design / Logical database design and mapping / Physical design and database implementation → **Due: 20*.12.2013. 23:59***

- Develop a Microsoft SQL Server 2008/2012 database with the following characteristics:
  - The name of the database should be same as your project name in capital letter format.
  - Create at least 6 tables in your database.
    - Each table should be normalized to third normal form.
    - Populate your data to an acceptable amount. (Each table should contain at least 10 records.)
    - Use indices, uniques, identities, check constraints, defaults, computed columns and triggers where necessary. Be sure to have at least one from each.
    - Use the most appropriate data types for the fields.
  - Create at least 4 views in your database.
    - Do not simply write "SELECT… FROM…WHERE…" statements.
  - Create at least 1 trigger in your database.
  - Create at least 4 stored procedures in your database.
    - You may create them for insertions, updates, deletions or specific business rules.
    - Try to do different jobs in each procedure.
- Submit a detailed report:
  - Explain what your database project is about
    - 1 paragraph or half of a page is enough
  - Write about your data and requirements analysis
  - If necessary, update the E/R diagram which you created in the previous step.
  - Explain each table and indicate why you used:
    - Columns, Data types used (and why, if needed)
    - Primary key, Foreign keys, Relationships
    - Constraints, Indices
  - Explain Triggers and Stored procedures
  - Explain Views

Step 4: Web interface → ***Due: 27.12.2013. 23:59***

- Create a user friendly web interface for your database.
- There will be a demo session for every project.
  - Demo sessions will be arranged and announced later.