

Marmara University – Faculty of Engineering – Department of Computer Engineering

Fall 2017 – CSE3055 Database Systems Project

Step 1	Proposal	0.9 pts	Due: 17.10.2017
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- 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	3.0 pts	Due: 24.10.2017
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- 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, Microsoft Visio 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	12.9 pts	Due: 12.12.2017
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- Develop a Microsoft SQL Server 2014 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	4.2 pts	Due: 26.12.2017
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- 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.