Marmara University – Faculty of Engineering – Department of Computer Engineering
Fall 2020 – CSE3055 Database Systems
Project

Step #3	Logical database design and mapping & Physical design and database implementation + (Req. ana. & Concep. db. des.)	8 pts	Due: 01.01.2021.Fri

1) Develop a Microsoft SQL Server database with the following characteristics:

    a) The name of the database should be same as your project name in capital letter format.

    b) Create at least 8 tables in your database.

        i) Each table should be normalized to third normal form.

        ii) Use the most appropriate data types for the fields of the tables.

        iii) Populate your data to an acceptable amount. Each table should contain at least 25 records, however a few of them may contain less than 25 depending on your business.

        iv) Use indices/indexes, where necessary. Be sure to have at least one.

        v) Use uniques, where necessary. Be sure to have at least one.

        vi) Use identities, where necessary. Be sure to have at least one.

        vii) Use check constraints, where necessary. Be sure to have at least one.

        viii) Use defaults, where necessary. Be sure to have at least one.

        ix) Use computed columns, where necessary. Be sure to have at least one.

    c) Create at least 5 views in your database.

        i) Do not simply write "SELECT… FROM…WHERE…" statements.

    d) Create at least 1 trigger in your database.

    e) Create at least 10 stored procedures in your database.

        i) You may create them for insertions, updates, deletions or specific business rules.

        ii) Try to do different jobs in each procedure.

2) Submit a detailed report.

    a) Project description: explain what your database project is about.

    b) Scope: what is included/exclude? Which processes are supported, which ones are not?

    a) Data and requirements analysis for the database and business processes.

    b) Diagram of whole database.

    c) Tables

        i) Name of the fields/columns.

        ii) Definition of the table.

        iii) Data types of the fields.

        iv) Information about indexes, primary key, foreign key.

        v) Information about uniques, identity, check constraints, defaults, computed columns, if any.

        vi) Information about triggers, if any.

    d) Views

        i) Name of the store procedure.

        ii) Definition.

        iii) Screenshots of the code of each view and its output.

e) Triggers

   i) Name of the trigger.

   ii) Definition, and when/how it works.

   iii) Screenshot of the code of each trigger, and screenshots of before and after states of the table data that each trigger works on.

f) Stored procedures

   i) Name of the store procedure.

   ii) Definition.

   iii) Screenshots of the code of each stored procedure, and screenshots of before and after states of the data that each stored procedure works on.

3) Write the following sentence in a text file: "We hereby swear that the work done on this project is totally our own; and on our honor, we have neither given nor received any unauthorized and/or inappropriate assistance for this project. We understand that by the school code, violation of these principles will lead to a zero grade and is subject to harsh discipline issues." Rename it as "we_swear.txt" and include this file in the zip submission file.

4) Only one of the group members (*i.e.* group representative, in short "GrRep") is going to submit all steps of the project using GrRep's info all the time.

5) Backup your database. Zip your database backup file with all your documents into a single file using filename GrRepStudentNumber_PS3.zip (*e.g.* 150118123_PS3.zip) and submit it to the site http://ues.marmara.edu.tr before deadline.

6) There will be a demo session for each project. Demo sessions will be arranged and announced later.

***   IMPORTANT NOTES

1) There will be a demo session for each project. Demo sessions will be arranged and announced later.

2) Only one of the group members (*i.e.* group representative, in short "GrRep") is going to submit all steps of the project using GrRep's info all the time to the site http://ues.marmara.edu.tr before deadline. However, all group members should have a complete and comprehensive understanding of all the work done for all tasks and steps of the project.

3) In case of any form of copying and cheating on solutions, all parts will get ZERO points. You should submit your own work. In case of any forms of cheating or copying, both giver and receiver are equally culpable and suffer equal penalties. All types of plagiarism will result in zero points from the homework.

4) If case of using your handwriting, your handwriting should be readable, clear and neat. If possible, do not use any handwriting.

5) Do not send project submissions through e-mail. E-mail attachments will not be accepted as valid submissions.

6) You are responsible for making sure you are turning in the right file, and that it is not corrupted in anyway. We will not allow resubmissions if you turn in the wrong file, even if you can prove that you have not modified the file after the deadline.

7) Grade evaluation may be done on selected parts of the project, so try to complete all parts of your project successfully.

8) No late submissions will be accepted.