BBM 473 - Database Laboratory

HACETTEPE UNIVERSITY
Department of Computer Engineering

Project
Fall '2018-2019
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PHASE II - Implementation

Due Date: 23:55, January 13, 2019

Overview

In this part of you project, your goal is to implement a solution for the problem that you describe in your design reports.

Details

You are going to develop a web application using the database you designed earlier. In this phase you will learn how to create a database and develop a web application. You **have to** use one of:

- PHP Laravel
- Django

frameworks to develop application. None of other frameworks are allowed. You **have to** use:

- MySQL or
- PostgreSQL

to store your data.

Database

- Generate SQL statements of your database you created in the previous assignment.
- Create sequences and triggers for automatically incrementing primary key fields in your tables.
- Generate insert, update and delete statements for all tables in your database.
- Determine at least one view scenario in your design and implement it.
- Determine at least one transaction scenario in your design and implement it. [1]
- Use at least one stored procedure.

[1] http://dev.mysql.com/doc/refman/5.7/en/commit.html

Web Application

- Login screen
  - Login screen for each user type (admin, ordinary user etc.)
  - Store passwords in an encrypted format.
- Interfaces to add, delete and update your tables.
- Statistics interfaces (at least 10 statistical query results, you must use mathematical SQL functions. Ex: avg, count, first, last, max, min, sum etc.)
- Processing history : Users' last 10 actions must be displayed in a dashboard panel
- At least two interfaces that are used for listing (Example: Students who take this class)
- At least two case that you can generate a report for given query (Example: Report avarage students' success rate for each course for last 10 years) (HTML or PDF formats)
- You have to add at least 10 records each of your table before you submit it and before the presentation.

Report

You are expected to write a detailed report which contains a brief overview of the problem, details of your implementation.

- You have to explain scenario for each user type. What can user(s) do and how?
- Give a detailed information for usage of your application. Which functions can a user do and how?
- List every required item (in database and web application sections) and show how did you implement it.
- Explain the relations that you used for your database design (why did you choose one-to-one relation of exactly one relation etc.).

What to Hand In

Your submission format will be:

- `diagram/*.png, jpg, jpeg, pdf` *(directory containing all ER diagrams)*
- `src/*.zip` *(directory containing all your source code)*
- `report.pdf` A pdf file.
- `readme.txt` Give a detailed information about your environment (vesion of the framework, what should be installed(requirements) etc.). Directions that helps to run your application.

Archive this folder as `<student number>.zip` and submit to submit.cs.hacettepe.edu.tr

Academic Integrity

All work on assignments must be done individually unless stated otherwise. You are encouraged to discuss with your classmates about the given assignments, but these discussions should be carried out in an abstract way. That is, discussions related to a particular solution to a specific problem (either in actual code or in the pseudocode) will not be tolerated. In short, turning in someone elses work, in whole or in part, as your own will be considered as a violation of academic integrity. Please note that the former condition also holds for the material found on the web as everything on the web has been written by someone else. You have to keep your implementation until it is evaluated.