**CS425: Database Design and Applications (Database Organization)**

Application Project – Group Work

Semester: Spring 2016

Faculty: Francis Leung

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Assigned: April 6, 2016

Due date and time: Your application is due at the start of your demo time. Demos will be scheduled on the last week of class and during the finals week (last day: May 6). Demo slots (which your group will sign up for) will be given in late-April.

*Some portion of your project must be implemented by using PHP. Please note that you MUST work in a group unless you received permission to work solo.*

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**Application Requirements Demonstration**

Each group is expected to demonstrate some (or all) of the following:

**Insert, update and delete:**

The application should provide a way to insert, update, and delete all data. For testing purposes, there should be a way to see all data in a particular table (i.e. an interface which displays all data for a “select \* from <tablename>”).

**Authorization and privileges:**

1. Show that the students can hide or make public selected information or all information in her profile.
2. Show that a student who is not the TA of the course cannot be assigned to become the moderator of a course.
3. Show that only the site wide moderator can assign moderators to an interest group/club/course.

**General processes:**

1. Demonstrate the process of register into an interest group.
2. Demonstrate the process of posting comments and discussions. The process will check that the posting will fail if the user is not registered to the course or group and the course or group moderators will be alerted.
3. Demonstrate the process of assigning a TA to a course and the assignment will fail if the person is also a student of the course.
4. Demonstrate the process of opening a discussion forum for an interest group.
5. Demonstrate the process of modifying and filtering messages.

**Queries:**

1. Display the 5 most recently discussions/comments from a specific interest group/club/course.
2. Display the 5 most recently entered discussions/comments from all the interest group/club/course that a student has registered to.
3. Display the past average GPA of all the courses taught by a faculty.
4. Display the courses with the highest and lowest average GPA by a faculty and by all faculties.
5. Display the list of all moderators, the group/club/course that they moderate and are members of.
6. Find the most commented on group/club/course.

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**Deliverables**

1. **Design Document (10%)**

Your Design Document is a revision of your HW 3 which is updated to address feedback that you will receive. The organization of your document should make it easy for its reader to see that the design meets the requirements of the application.

1. **Application Software (65%)**
2. All the code and test data that will be demonstrated in your demo, including scripts that build the executable.
3. A README that describes how to build and execute the code and test data submitted in (a).
4. Your code and test data should support the insertion, update, delete and query functionalities described earlier in this project description.
5. **Test Data and Test Document (20%)**
6. In the testing document, for each requirement in the “General Processes” section, you must:

\_ List the requirement

\_ List all tests necessary to perform on that requirement

\_ List the expected outcome

\_ List the actual outcome

\_ Indicate if the implemented requirement passed all testing

1. You must provide all the necessary test data for the above tests.
2. **Demo (5%)**

Each demo will last 25 minutes. All group members must be present in the demo. The demo should introduce each member of the group and the roles that they play in the project development. It should include a conclusion slide summarizing the results. The grade for the demo will be based on how effective and smooth the demo went.

The bulk of the demo should be used to demonstrate the capabilities of your application software. You goal is to show that your application supports all the requirements. You will be asked to show you can perform the insertion, updates, deletions, and queries described earlier. The grade on the Application Software (65%) will mostly be determined whether you can show the functionalities in the demo.

1. **Self Evaluation (no grade if not submitted)**

We ask each of you to submit a self evaluation. It should contain a table showing how the work is partitioned among the group members and the contribution of group members on the work component. Indicate the amount of work done by each member if a component is worked on by two or more members. You will also give an overall grade in a scale of 0 to 10 to each member of the group, including yourself. Your grade on the project may be adjusted according to your self evaluation and your group mates’ evaluation of you.