COP 4710-RVC
Spring 2018
Project Specification

Due Date: Apr 17th (Thursday), 2018 2:00 PM.

Project Description:

Part1: **Views and Indexes**

1. A view is a stored query that has been given a name and virtually saved in the database. Unlike ordinary tables in a relational database, a view is the dynamic result of one or more relational operations and it does not actually exist in the database but is produced upon request by a particular user, at the time of request.

   a. List the advantages of views over ordinary tables (base tables).

   b. Create three views that a user of the university database would find useful.

2. Databases usually contain large amounts of data and a DBMS is required to read data from disk whenever a query is executed. A database index is a data structure that improves the speed of data retrieval operations by enabling the DBMS to read only a subset of all data from disk when answering a query.

   a. Create an index for the *Students* table on the **email** attribute in the university database and provide a point query for which the index is useful.
   b. Create an index for the *Enroll* table on the **grade** attribute in the university database and provide a range query for which the index is useful.

Part2 : **Web interface**

This project should use UNIX server **ocelot.aul.cs.fiu.edu**. You can connect to the server using ssh remotely. If you are registered for the course, you should already have gotten an account in the undergrad Lab; your username is your FIU username, and your default password is the initial of your first name, followed by your Panther ID, followed by initial of your last name. (For example, if Steven Jackson has Panther ID 1234567, his initial password would be "s1234567j".) If you have trouble with your account, you can get help by e-mailing to request@cs.fiu.edu.

With the database you created in project1 and project2, create a web interface in JSP running on Tomcat to manipulate the database.

The minimum requirements are:

- Insert, delete, and update any information in the database. That is, insert, delete, and update the information of students, faculties, courses, enroll and so on (USING TEXTBOX TO ISSUE A QUERY AND RETREIVE RESULT IS NOT ACCEPTIBLE).

- View (in separate pages) all students, all faculties, all courses, and so on.

- Allow users to search for students and faculties by their names, search for courses by their description.

There should be a) a login page that requires username and password; b) a main home page from which there are links to all other pages, along with brief descriptions on what each page does.

Submission

Part1: one document called View_Index.doc

Part2: all the jsp files and a breif readme.doc into one folder called Web_Interface.

Compress both the file "View_Index.doc" and the folder "Web_Interface" into one zip file and name it following the format "<<Name>>_Project4.zip". Upload the zip file to Moodle system.

Demonstration

For all the students, you will need to demonstrate your web interface to the TA at SCIS Grad Lab (ECS 252) during Apr 17th, 2018 (Tuesday) 2:00PM~4:30PM, and Apr 19th (Thursday) 2:00PM~4:30PM. (10min/person)

Please sign your name for one timeslot via the following link:

https://goo.gl/E9UNlM

You should make an appointment through Email, if you cannot make any of them.

Grading Percentage

Category	Grade Percentage
Part 1 Views and Indexes	20%
Part 2 Web Interface	80%