CS34800 Project 1

Due date: Friday, March 4, 11:59pm (submit via turnin)

In this project, you will develop a University Course Management System.

Description of the problem:

The system will provide some basic course management tools to help professors and students in their academic activities. The application will support three kinds of users: *administrators*, *faculty members* and *students*. The database of the system should maintain information about faculty members, students, departments, classes, enrollment, evaluations and grades of students.

1 User Interface Functionalities

The user interface should provide the following functionalities:

Tools for Faculty:

1. Create/Modify a course

   This tool lets a professor create a new course in the system or modify a previously created course. The information that will be maintained for a course should include:

   courseName, *semester*, *year*, *meetsAt*, *room*, *facultyID*

   facultyID is the ID of the professor who teaches this course. A professor can only create/modify the courses that he/she created.

2. Assign students to a course

   This tool lets a professor assign students to his/her course. Students cannot add themselves to a course; they are added only by the professor who created the course.

3. Create/Modify an evaluation

   Each course could have several evaluations. This tool lets a professor create and modify evaluations for the courses that he/she created. The information that the system should maintain about evaluations will include:

   evaluationType, *weightage*, *dueDate*, *meetingRoom*.

   An evaluation could be one of these types – HW, Midterm, Final Exam, or Project. Further, an evaluation can only be modified before the due date.

4. Enter Grades

   A professor can enter a grade for a student for all evaluations of a course.

5. Report of Classes

   The report format is as follows:

   courseName, *meetsAt*, *roomNo*, *numStudents*, *numEvaluations*

6. Report of Students and Grades

   The report format is as follows:

   courseName, *semester*, *year*, *studentName*, *currentGrade*

   where current grade considers all the evaluations of a course. You should use the attribute *weightage* of an evaluation to calculate the current grade.

Tools for Students:

1. Calendar of evaluations

   This tool will inform a student of all the evaluations that have been created for courses in which he/she is registered.

2. My Courses

   A report showing information about all the courses for which a student is registered.

3. My Grades

   This tool shows the grades of all the evaluations in every course in which the student is registered. It should include the current final grade.

Tools for Admins:

1. Department Report

   A report that shows the information of each department including the name of the department and the name of the Head of the department.

2. Faculty Report

   A report that shows the list of faculty members in all departments.

2 Project Tasks

(a) Creation of the DB (**30 points**)

You need to create a database in Oracle that supports all the requirements of the application. Model an ER diagram for the database and then create the database schema from the ER diagram.

(b) Creation of the application (**70 points**)

Create an application that supports all the functionalities of the University Course Management System.

Submission Guidelines

The following materials should be turned in:

1. The ER Diagram
2. The database schema
3. The SQL scripts to create and populate database
4. The SQL scripts for PL/SQL procedures (if used)
5. The application code
6. Instructions on how to compile and run the application.

Turnin Instructions:

1. Create a directory having your user name (career account username); say XXXX. Copy everything that you want to submit into this directory.
2. Move to the parent directory of XXXX. Enter the following command:

   turnin -c cs348 -p project1 XXXX
3. You can verify your submission by typing the following command:

   turnin -v -c cs348