CSBP461: Internet Computing

Term Project

PHASE		DUE DATE
-------		----------
I	Application description and DB design	**October 26, 2023**
II	Implementation & presentation	**November 22, 2023**

OBJECTIVE

As a requirement to complete the Internet Computing course, all students are expected to participate in the design, development, and evaluation of an interactive Web Application. This project is given **20 %** of the course mark. Students will undertake **two pieces of coursework**: a **design report** to generate an analysis, specification, and design of a system and a **proposed application** system.

This project will allow you to practice designing and implementing Web-based solutions to real problems. In addition, it will allow you to practice current technologies for developing Java-based Web applications, mainly Servlets, JSP, MVC, XML, and Web Services.

OVERVIEW

For this project, you are required to design and implement a Web application using the technologies presented in the lecture. Students are free to suggest any application domain and discuss it with the course instructors. The application should allow the user to complete the list of functionalities. **A database should be designed and then used by the Web application.**

FORMAT

This is a formal group exercise. **You will be working in groups of four students (max)**. Each of the group members is responsible for handling the whole exercise and its outcome. You are free to choose your group members; Each group should designate **the leader of the group** who will be responsible for submitting the required documentation together with the code source of the application.

PROJECT DESCRIPTION

Students in teams of 4 students are required to select an application domain on which they are willing to work.

Examples of applications:

Online CIT Alumni. The W**e**b application should enable a user to complete the following tasks:

- Registration form
- Login into the application

- List all the future events
- Register for an event
- Vote to elect the alumni representatives
- Submit suggestions to the alumni
- Post an announcement (e.g., next meeting, etc.)
- Consult News
- Submit/Consult Job offers
- Etc.

Online Registration: The Web application should enable a user to complete the following tasks:

- Registration form
- Login into the application
- List all courses available in each semester
- Register in a course/Drop a course
- List the detailed information about each course (e.g., title, schedule, room, etc.)
- Submit/consult/update her future study plan for the next semesters.
- Etc.

- **Online Bookstore:** The Web application should enable a customer to complete the following tasks:
  - Register at the bookstore
  - Login to the bookstore
  - Search for a book title by providing, for example, a few keywords
  - Add books to a shopping cart.
  - Remove books from the shopping cart
  - List out the customer orders
  - Checkout to order

- Display details of an order.

Students are required to suggest other application domains with similar functionalities.

DOCUMENTATION REQUIREMENTS

A typed report is handed in for grading at the end of each phase.

Phase I: The report should include the following:

1. A detailed description of the application domain of your choice. State as clearly as possible what you want to include.

2. A description of the functionalities that you plan to offer with the initial design (Sketch of the forms and interface)

3. The Database Entity Relationship Diagram (ERD) and Schema (tables).

Phase II: The final report should include the following:

1. An updated version of the first report, including modifications you did in the previous deliverable (e.g., update of ERD and database schema)

2. A description of the application's overall design (state if you are using **MVC** architecture or not).

3. Some screenshots of your interface.

4. Sample SQL statements you use in your application

5. A conclusion evaluating the system, including a description of its limitations and the possibilities for improvements.

The source code for your Web-based interface, including all your project files (HTML, JSP, Servlets, images) should be submitted as a zip file. The dump of your database should be saved in a .sql file.

Individual project log:

Each group member will keep a journal to record her activities and contributions to the project. For example, you are required to document the time you met with the group members, what you discussed, and what your role was during that meeting. At the end of the project, your log will include a brief statement on what you have learned during this project. These will be counted towards grading each student's individual mark. You are required to submit a hard copy of these logs.

GRADING

The project carries 20% of the class grade.

GUIDELINES FOR SUGGESTED TECHNOLOGY

The following technologies are to be used:

- HTML, Java, JSP, Servlet.
- MVC
- Any other tools you want to include (JavaScript, Flash, Web services, etc.)

SUBMISSION

Submission will be performed in two phases:

- **Submission of phase 1:** You are required to include each group member's name and student ID as well as the section number. Name the Phase1 report file following the convention given below:

  <ID of the group leader>_project_phase1report.doc

- **Submission of phase 2:** Name the required files following the convention given below:

  <ID of the group leader>_project_ finalreport.doc

  <ID of each group member>_project_ timelog.doc

  You are also required to place all your application's source code in a compressed (.zip) file. Name the compressed file following the convention given below:

  <ID of the group leader>_project_source.zip

  <ID of the group leader>_database_dump.sql