CS6314.002 Web Programming Languages - Final Project

Functionalities

Each project should include following major functionalities:

- User signup: Register a new user to the system.
    - Check the new username or email address if it's already registered to the system using AJAX.
    - Form validation: Check if all mandatory fields are filled out.
    - Check if password is strong enough. Define the rules of having a strong password. User passwords should be hashed and hashed version of passwords should be stored in the database.
- User login.
- Session Management.
- CRUD operations
    - A Database item should be associated with an image.
    - Create items (Admin only) – Adding new items to the inventory.
    - Read items – Fetch records from database in the form of XML/JSON and render them on page.
    - Update items – Update the stock count based on transactions and admin should have the ability to modify the description and value of an item.
    - Delete items (Admin only) – Deleting an item from the inventory.
- Search and Filter capabilities.
- Responsive application that adapts to various devices and screen sizes.
- Add items to cart as you browse and checkout at the end.
- Store Favorites(optional).

Each functionality listed above is **5 points**. If you miss any of those functionalities, you will lose 5 points for each (except for the last bullet).

Front-end design

You can use Bootstrap and Bootstrap templates for user interface design. You will be free to have your design choice but it's important to have a professional look for all pages (i.e., the same menu or navigation bar appears on top of every page etc.)

Back-end design

You can use relational databases or MongoDB for database component. For server-side scripting, you will use Node.JS and Express.js and create an API. You can consume the API and build your user interfaces by using JavaScript (AJAX) or React.

Project Report

Project Report should include following items:

- Name for the Website
- Database Design: Database structure including the tables and primary and foreign key definitions on tables. Alternatively, you can include your "Create Table" statements to show your database schema. In case you use MongoDB, provide information about your data model (example objects).
- Screenshots for main functionalities (5-6 screenshots will be sufficient)
- Team Members: Names and Net-IDs for team members. Include the section number for each member.
- Work division among team members: who has completed which part (be specific and try to give page names). Please note that every team member should be actively involved in every step of the project development (database design, client-side and server-side scripting) and work should be equally divided between team members.

Deliverables:

Each team is responsible for sending following items:

- Project Report. File name should be CS6314-Teamnumber.pdf
- Source files (zip your project directory).
- Video recording of your website's demo. In the video, you will walk viewers through all main functions of the website. The video should be between 3-5 minutes long. Include the video link at the end of project report.

Final due date for project submission is **Dec 10, 2023, 11:59 PM.**

Grading

- UI Design – 15 points.
- API implementation – 15 points.
- Working Application (Hosting and Endpoints) – 15 points.
- Database schema – 15 points.