COSC 360 Project – Online Discussion Forum

Due Dates: See Milestone Dates

Overview:

The project is designed to help develop your skills for full stack development. With this project, you will build an online discussion forum that will allow users to register, create and participate is discussions. **The project is an individual project**. Everyone will be working on the same project theme.

Hardware and Software:

You will develop the project using Linux, MySQL, Apache and PHP on cosc360.ok.ubc.ca, in addition to CSS, HTML5 and JavaScript on the client-side. You may use your own hardware and software for hosting if you wish with the requirement that it uses these technologies. The restriction is the project must be accessible over the Internet and all source code must be available for review. It is strongly recommended to keep your code under version control.

MyDiscussionForum Website:

The **MyDiscussionForum** website will allow registered users to engage in online discussions and unregistered users to view discussions similar to forums such as Reddit and HackerNews. The goal is to produce a similar type services that allows users to register, post stories and make comments on items. Additionally, unregistered users must be able to view the content but will not be able to edit or comment on posts.

A first goal is to create the layout for the site. The layout is to be a 2 or 3-column layout with navigation links along the top**. No styling frameworks are permitted as you are to develop the styling for the page using CSS**. The page requires a masthead as well as a footer. The navigation links need to be available regardless of the where a user is viewing the page.

Pages will need to be created for user registration that allows for the entry of user information along with user image. The form will need to be validated before being submitted using the appropriate technology.

Project Statement: To build a web-based discussion forum that allows users engage in discussion on different posted threads. Registered users should be able to track the activity of comments on different threads, post comments, create new threads and browse current threads. The system must also support internal use by administrators who can track discussions and moderate discussions, resolve user problems (such as forgotten passwords), and generate usage reports.

Project Objectives: The objectives are divided into two categories. The first category is the minimal requirements for the project to get a passing grade (C). The other requirements are some of the additional options that can be added to create an improved project. These objectives are further divided based on the implementation of different functional components utilizing different technologies.

Baseline Objectives:

Website user's objectives:

- Browse discussions without registering
- Search for posts by keyword without registering
- Register at the site by providing their name, e-mail and image
- Allow user login by providing user id and password
- Create and comment on discussions when logged into the site
- Users are required to be able to view/edit their profile
- User password recovery (via email)

Website administrator's objectives:

- Search for user by name, email or topic post
- Enable/disable users
- Edit/remove posts items or complete posts

As this project is about demonstrating and applying different technologies, you will utilize different technologies in the construction of the site.

Minimum Functional Requirements:

- Hand-styled layout with contextual menus (i.e. when user has logged on to site, menus reflect change). **Frameworks are not permitted**.
- 2 or 3 column layout using appropriate design principles (i.e. highlighting nav links when hovered over, etc)
- Form validation with JavaScript
- Server-side scripting with PHP
- Data storage in MySQL
- Appropriate security for data
- Site must maintain state (user state being logged on, etc)
- Responsive design philosophy (minimum requirements for different non-mobile display sizes)
- AJAX (or similar) utilization for asynchronous updates (meaning that if a discussion thread is updated, another user who is viewing the same thread will not have to refresh the page to see the update)
- User images (thumbnail) and profile stored in database
- Simple discussion (topics) grouping and display
- Navigation breadcrumb strategy (i.e. user can determine where they are in threads)
- Error handling (bad navigation)

Additional Requirements:

- Responsive design for mobile devices
- Search and analysis for topics
- Hot threads
- Visual display of updates, etc (site usage charts, etc)
- Activity by date
- Tracking (including utilizing tracking API or your own with visualization tools)
- Collapsible discussion threads
- Alerts on discussion changes
- Admin view reports on usage (with filtering)
- Styling flourishes
- Tracking comment history from a user's perspective
- Accessibility
- Your choice (this is your opportunity to add additional flourish's to your site)

Deliverables:

This project should demonstrate your knowledge in full stack web design and programming. Your final submission will be submitted both electronically in addition to the site being available on cosc360.ok.ubc.ca. All your code and related files should be submitted in a zip file that is based on the correct file structure for the site.

Milestones:

Friday, March 10th, 2017 – 30% (Client-side experience)

- Layout document (Planned layout of your page in hardcopy/electronic copy showing elements, sizes, placement – this is the plan for what your site will look like)
- Organization of pages (How are pages linked?)

- Logic process (How will a user engage with site?)
- Static design and styles of pages
- Examples of each page type
- Client-side validation
- Client-side security

Friday, March 24th, 2017 – 30% (Site should have minimal core functionality)

- Server-side implementation complete
- Posted on cosc360.ok.ubc.ca
- Server-side security
- Discussion thread storage in database
- Asynchronous updates
- Database functionality complete
- Core functional components operational (see baseline objectives)
- Preliminary summary document, indicating implemented functionality

Wednesday, April 5th, 2017 – 40% (The full site)

- Final delivery of site with additional functionality
- Summary of features implemented
- A 2-3 page walkthrough document that can be used to test the site by performing the walkthrough you describe. It is to your advantage to include sufficient detail to highlight the best features of your website. This should also include things like **required login ids and passwords**, how to test your site as well as identifying any unique features. This document will be used as a guide to test what you did. **This document should be written as a user guide.**
- A 2-3 page detailed description of your implementation from a system or developer's perspective including: What features did you implement? Include a description of the PHP and JavaScript files of your web site. How does your web site work at a high-level? Identify known limitations of the site?

Comments:

You are welcome to submit before the deadlines. The milestones are in place to indicate what will be evaluated at these points (ie. Layout, client-side validation, and security will be evaluated against the basic functional requirements) but you can improve with additional functionality which will be evaluated at final submission.

This project is not intended to be a complex project (in terms of the content and number of pages) but is intended to provide the opportunity to develop and showcase your full-stack skills. In the development of the project, focus on key functional objectives and work through them in a planned fashion. A simple, functional and well organized side is acceptable as long as it contains the required functionality utilizing the appropriate technology. Please review the functional requirements to ensure your design satisfies the requirements.