CSCB20 - Assignment III - Course Webpage

Assignment III was an extension of Assignment II where dynamic content was added through the use of Javascript, Flask, and SQL. The previous Assignment heavily involved creating static HTML pages for the main content of a course website and styling the elements using CSS. The implementation in Assignment III had a major change in integrating Flask, the Python-based framework that acted as the backend for the website.

Flask provided a template for the project directory and also created app routes for each webpage. Its main use as a backend tool allowed the webpage to have seamless template file renderings and redirecting URLs. Combined with SQLite and Flask Alchemy, these modules allowed the website to store crucial information, such as login details, passwords, assignment details, and more.

The first major design decision was the relational schema, which was designed using SQL queries in the terminal and viewed/manipulated in DB Browser. Once the schema was set and tested for coherence the data was populated and tested with various users.

The given relations in the schema included users, instructors, students, assignments, and feedback, and their well-designed structures created proper relationships between the models. After these models/classes were established in Flask the fun part began. As a lot of content was added using these new queries along with the templates from before, this report will just list some of the major features.

- Login/Register front-end designed with JS, backend handled through Flask
- The Course Team page now shows every instructor who registered with an “instructor” branded account
- Students can send course feedback to any instructor
- Instructors can view the feedback received for every question in the poll, while still keeping the anonymity of the senders
- Generated template grades for each registered student
- Students have the option to submit regrade requests to their instructor, with the UI display including a JS modal
- Instructors can view and change their students’ grades while also viewing any reasons for their remark, using another JS modal, similar to before
- Overall enhanced the UI from Assignment II, using various CSS techniques

A feature I could've implemented in the future was for Instructors to create course announcements. The UI had been implemented from Assignment II but I didn't have time to make it dynamic, as it currently only displays a preset list of announcements. Although not part of the assignment description, this feature would've added a nice touch to the experience.

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