Saurabh Verma Internet and Web Systems I Project Report

ULearn

About

ULearn is a Learning Management System (LMS) that helps people design online courses.

Technology

ULearn consists of a backend server and a front end client. The server is written in Java and uses Spring Framework for REST APIs. The front end client uses ReactJS/TypeScript/Webpack to build a component-based, type-checked web application that minimizes the likelihood of errors.

Progress Reports

Weekly progress reports can be found on Github: https://github.com/sv-uml/ULearn/tree/master/Weekly%20Update

Discussion/Thoughts

I was unable to configure the Weblab user environment in a way that allowed external traffic to access the Tomcat server that was running internally. In order to ensure that the web application functioned as expected in the Weblab environment, I wrote a PHP file (route.php) that acted as a "middle-man" between external traffic and the Tomcat server. It analyzed the request, extracted data about the API route, query parameters and request method and then created an internal request to the Tomcat server. When the Tomcat server responded, it sent the response back to the user. To the front end client, it looked like the request was directly being received by the Tomcat server.

Time constraints led to a lot of features getting cut (analytics, course materials page, reviews/ratings etc.)

References/Works cited

- https://www.learninglight.com/enable-lms-ui-design/
- https://www.litmos.com/blog/course-design/5-training-design-patterns-kickstart-new-lms
- http://blog.learnamp.com/8-reasons-why-your-current-lms-is-missing-the-mark
- https://theblog.adobe.com/4-golden-rules-ui-design/

- https://react-redux.js.org/docs/introduction/quick-start
- $\ http://jasonwatmore.com/post/2017/09/16/react-redux-user-registration-and-login-tutorial-example$
- $\ https://medium.com/quick-code/adding-authentication-to-react-redux-firebase-app-f0efcb1c519a$
- $\ https://medium.com/coding the smartway-com-blog/learn-redux-introduction-to-state-management-with-react-b87bc570b12a$