**Software Design and Engineering**

**Lab Document**

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| **High Level Purpose Statement:** | I wanted to take my last Spring Boot Lab and experiment with what it would be like to integrate React for the frontend. I wanted to see how easy or hard it would be to take the existing project and do this. |
| **Experimental Design:** | First, I had to research React because I have actually never used it haha  Luckily I do have experience coding websites so I was able to minimize a lot of the learning curve.  My main thing to figure out was how to get React and Spring Boot to talk to each other. |
| **Resources Available:** | • Gradle documentation  • Spring Boot documentation  • React documentation  • PostgreSQL setup guides  • YouTube tutorials on Spring Boot and full-stack integration |
| **Time Estimate:** | I think I will spend about 6 hours on this project seeing as most of the project is already built and I am mainly experimenting with integrating React and Spring Boot together. |
| **Experiment Notes:** | After learning how to work with React, it was actually super easy to integrate it with Spring Boot. Both technologies seem to work really well together, I was pleasantly surprised with how much more I enjoyed running my program this way vs having to build out a GUI in java. |
| **Results:** | • The backend successfully starts, creates the database tables, populates them, and exposes the REST API.  • The frontend is served by Spring Boot and loads in the browser.  • The movie recommendation system works as expected, complete with confetti, ticket download, and themed styling. |
| **Consequences for the Future:** | I now have a deep interest in exploring more full-stack development projects and diving deeper into both React and Spring Boot. |