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Internet Systems Programming

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Final Report

Implementation Details

We structured the back-end of the server using MariaDB, Node.js with express.js, and bcrypt for security. For the front-end we used Gatsby, a flavor of React. For the actual design decisions of the website we decided to use an approach that separated all large elements from eachother using abstraction. Our server was the step between our static webpages and our API knowing nothing of either of the implementations of each of them, only knowing to serve webpages and send requests to the API. This type of linkage was used to try to inhibit the need to think about how these back-end functionalities would be implemented when working on the front-end. Our API is the connection between our server and our database and serves the purpose of preventing needing to think about the database connections when working on the functionality of getting requests or serving responses. The only piece of our software that was made to understand all of the functionalities of the design was our build process, however there is not a very large build step as most things once initialized are able to function standalone.

Contributions of Group Members

Seth worked on the front-end of the website largely focusing on how the API connections would integrate with the functions that the website needed to perform for users. He also focused on the aesthetic design of the website and many of the design decisions regarding UI.

Issues Encountered

Getting React to work around scopes where the element is not yet rendered.

Screenshots