Short System Design Report Assignment

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1dv612 Web architecture
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Inner communication between **Frontend**(Reactjs) and **Backend**(Expressjs) will use **HTTP**.
I chose to work with JavaScript (Nodejs, React) because it is a complete language for web development, it is suitable for both client and server side code. The language is supported by useful frameworks and libraries that makes it easy to work with Github and Slack API.

The Expressjs framework promotes a layered architecture with **MVC** structure which I will try to uphold.
I chose React because I wanted to try to build a “bigger/real” application with it, (previously it has only been used for small data rendering).
The Reactjs library does not promote any particular architecture but there is an engaged community that promotes different structural practises. I will implement React by using the hooks, because I dread classes in JavaScript.

The **OAuth** to Github will also be handled on the **server** side, I chose to work with Passportjs, it is easy to implement and has options to create and configure cookies.
The **token** received from a successful authentication is stored on the user in the database and used in every request to authorize the requests from the client and send the correct data to the correct user. (The token is updated in the database every time the user logged in).

I chose **MongoDB** because of the one security property, mognoDB does stringify all input data which gives some confidence, that is not the case with some ORM databases.

The **server** will handle all communication between:

- Github API
- Slack API
- MongoDB
- Handle client requests (asking for organizations, authenticated user info and so on)

The **client** will never fetch outside resources, and only ask the **server** for any data needed:

- Request data from Github
- Request settings from MongoDB

Hosted
When the app is deployed on **Heroku**, it will communicate with the Internet by **HTTPS**, the certificate is signed implicitly with Heroku as a feature of the deployment with this particular service.