

WebChain

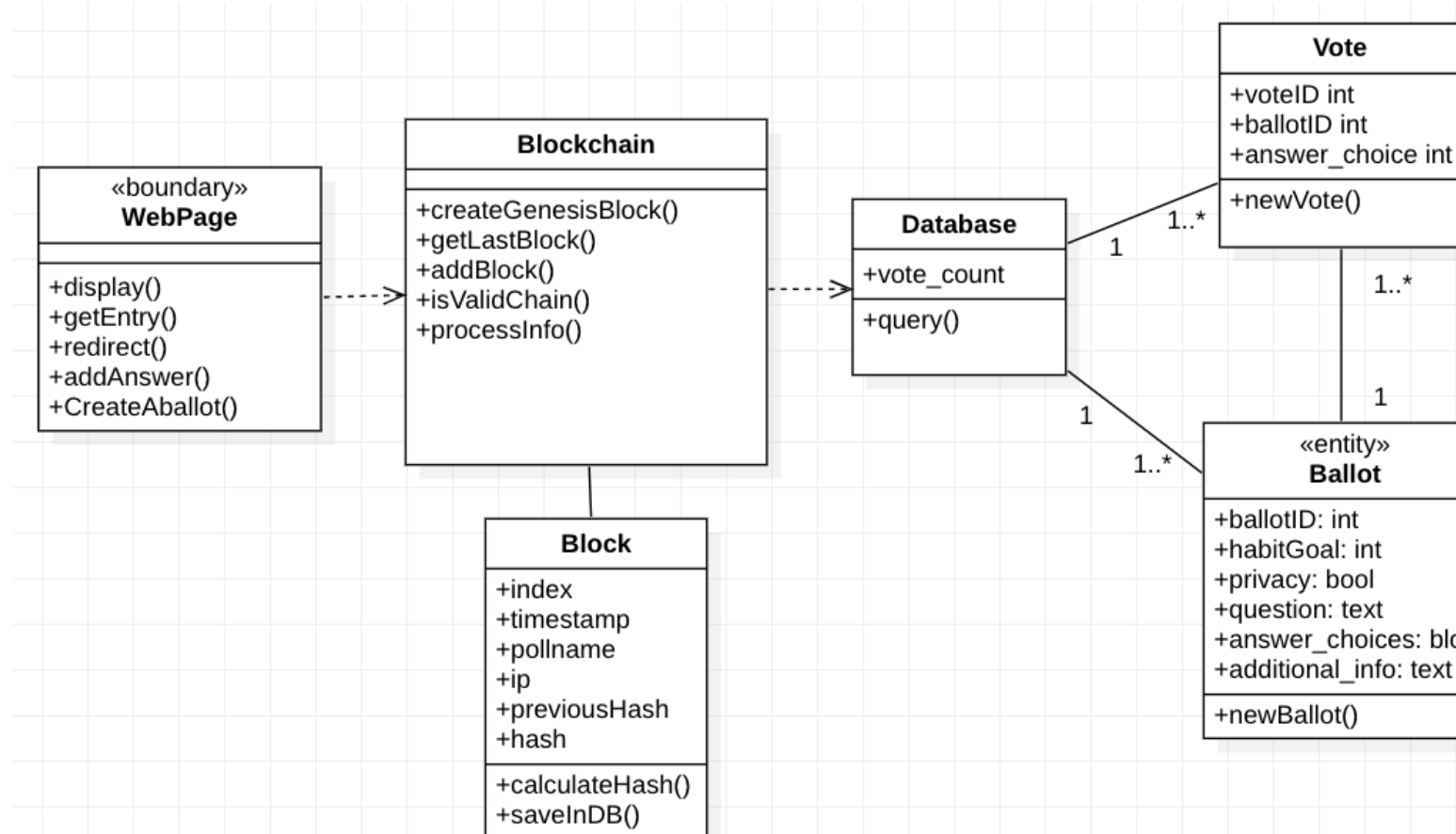
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Problem

- When users vote online, a bad user can gain access to the data and change the tally of the votes.
- Without having a trusted central authority to maintain the tally, vote integrity is questioned.
- Some may not trust anyone with their vote at all.

Class Diagram



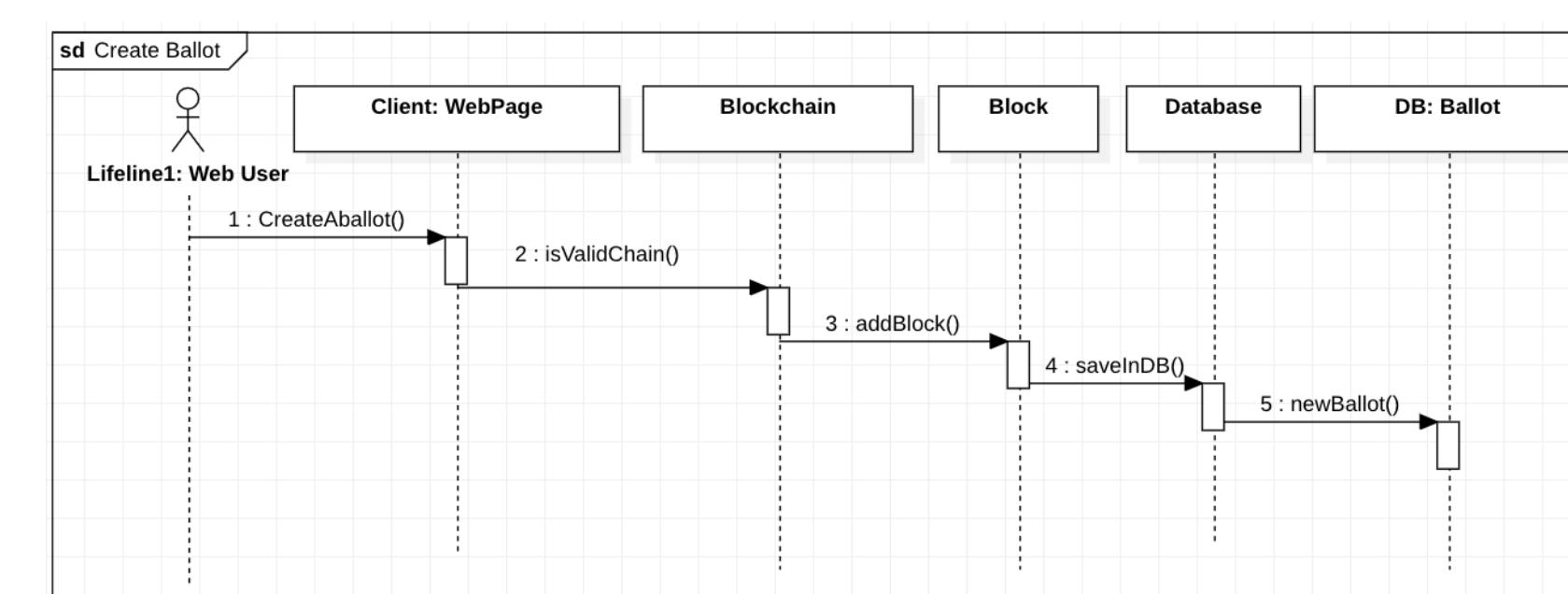
Contributions

- Initialized the GitHub repository and task board. Built up the initial codebase using React.
- Designed parts of the backend code for the voting system and provided assistance with debugging.
- Brainstormed initial idea and tech stack for the the project.
- Held an exercise to code with JS.

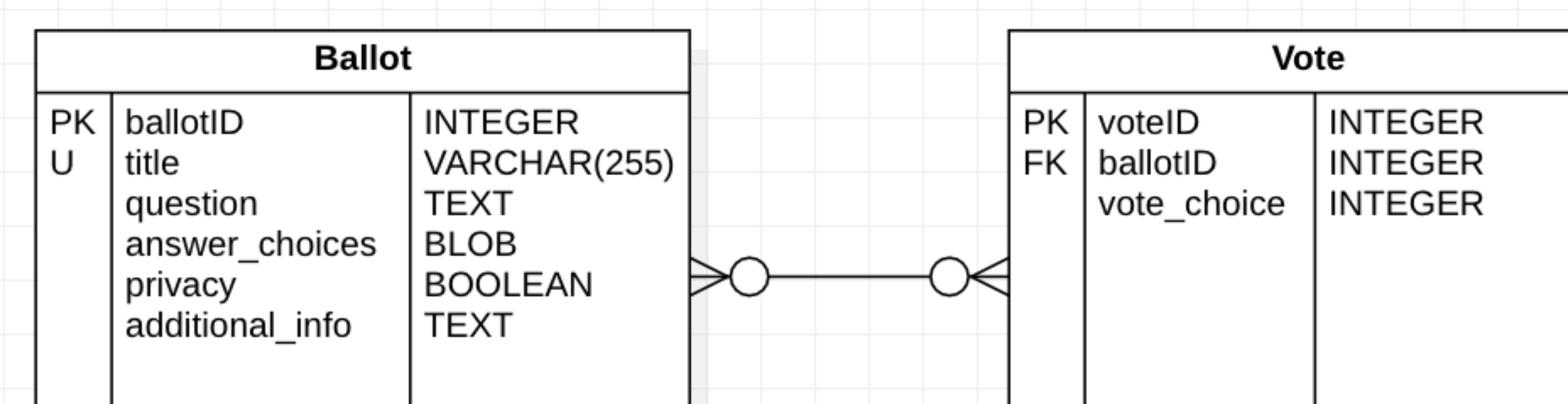
Current System

The system consist of a frontend codebase to display the voting system and backend codebase to store the data in a database, and record it into the blockchain for verification and Integrity.

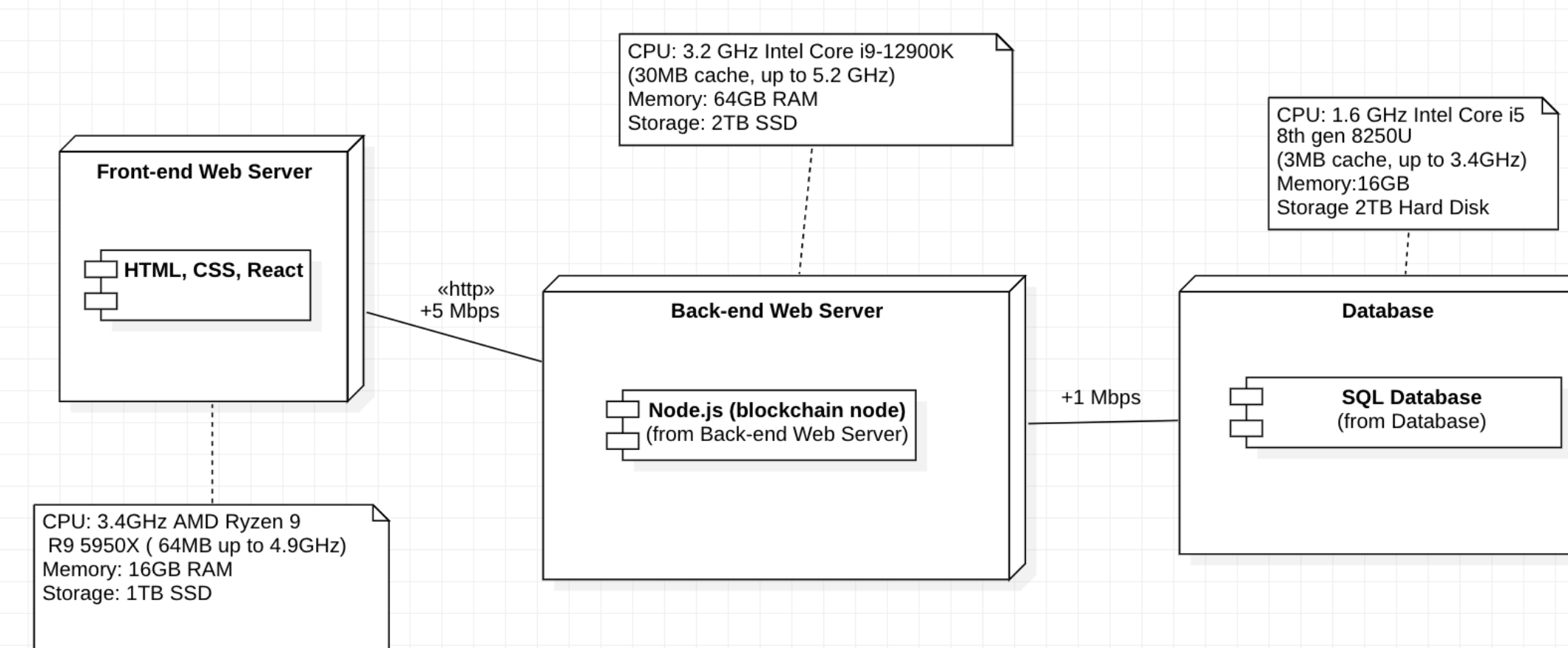
Sequence Diagram



ER Diagram



Deployment Diagram



Requirement

- Implement block chain into the voting system to create a voting record that cannot be tampered with.
- Create a site that can do the voting implementation like normal, but each vote is saved to the blockchain and no user will be able to change the tally without accessing the majority of the computers, which is unlikely.

Summary

Voting online may be prone to hackers and cheaters, so there need to be a way to verify that each vote is valid and intangible. Hackers can access the data without permission and change the votes without leaving a trace of the original count. With blockchain, we can create a reliable system that will record each vote to a shared intangible ledger for all to see. It's potential creates a way to reliably vote online and save costs by not printing physical ballots. The ease and reliability makes the implementation of blockchain technology for voting useful in practice.