

PROBLEM

The main goal of this project was to create a website backed by blockchain technology. The team decided to create a voting system for a user to create a ballot and other users can vote on the ballot.

SYSTEM DESIGN

- WebChain's front-end uses HTML, CSS and JavaScript
- WebChain's back-end is made with JavaScript

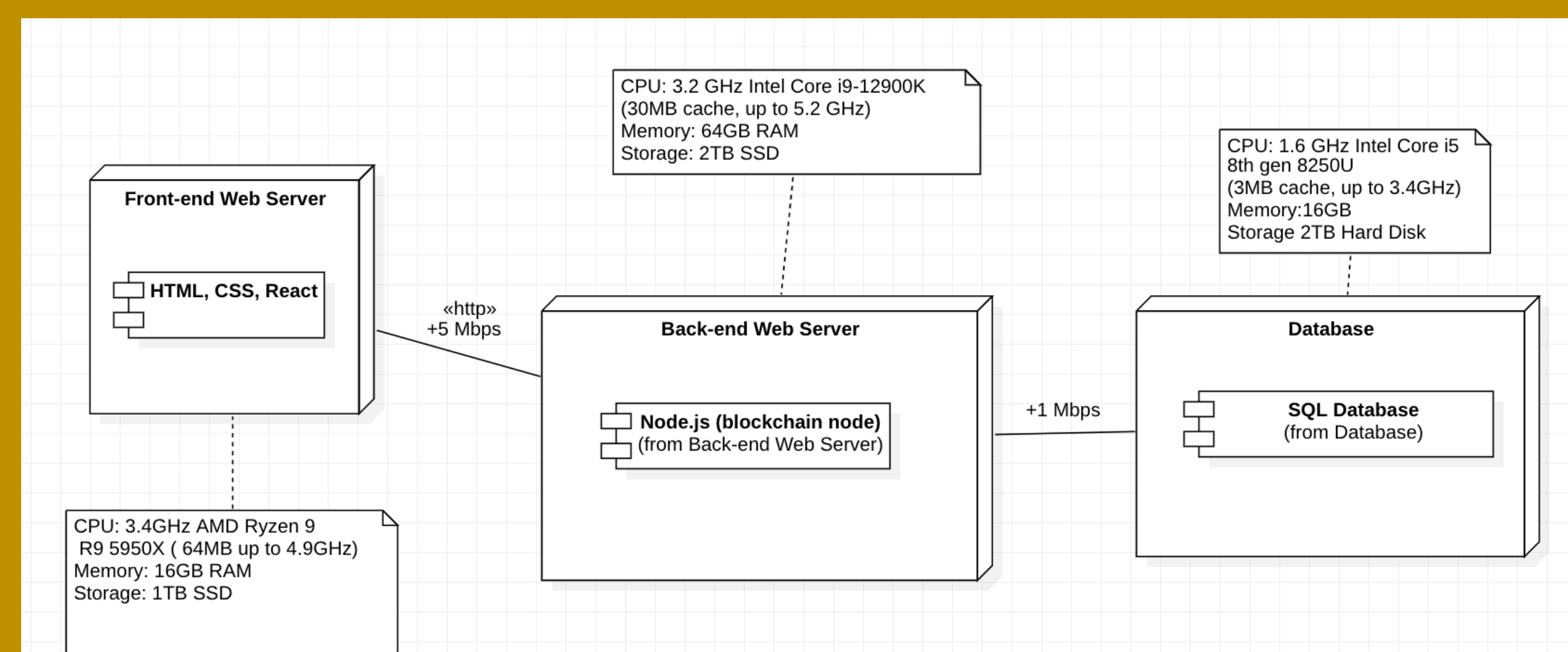
SUMMARY

Though our implementation is not fully complete, goal is for the ballots in the blockchain to be accessible through the site and be able to share the ballots with others.

IMPLEMENTATION

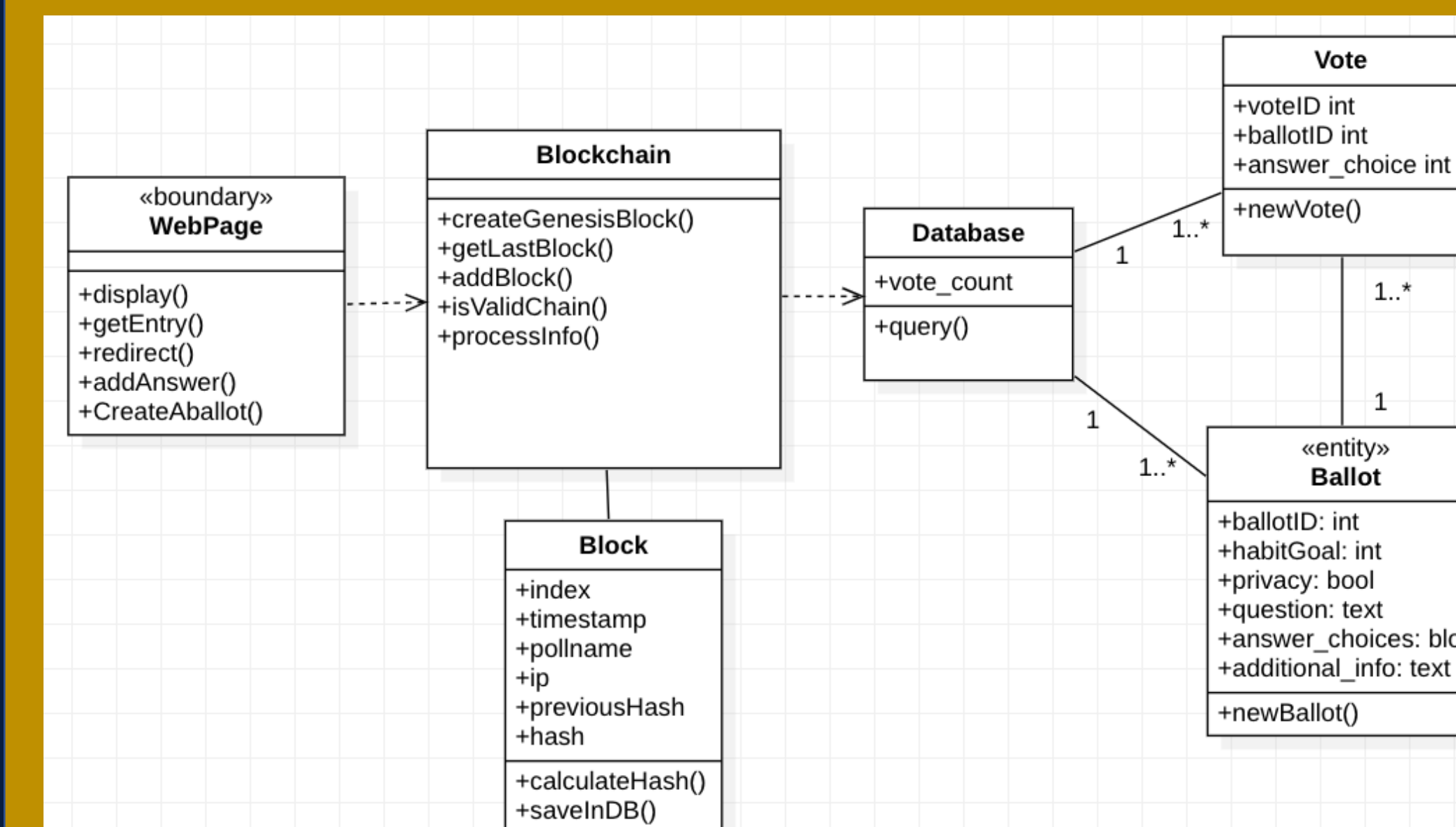
CURRENT SYSTEM

Deployment Diagram



OBJECT DESIGN

Class Diagram

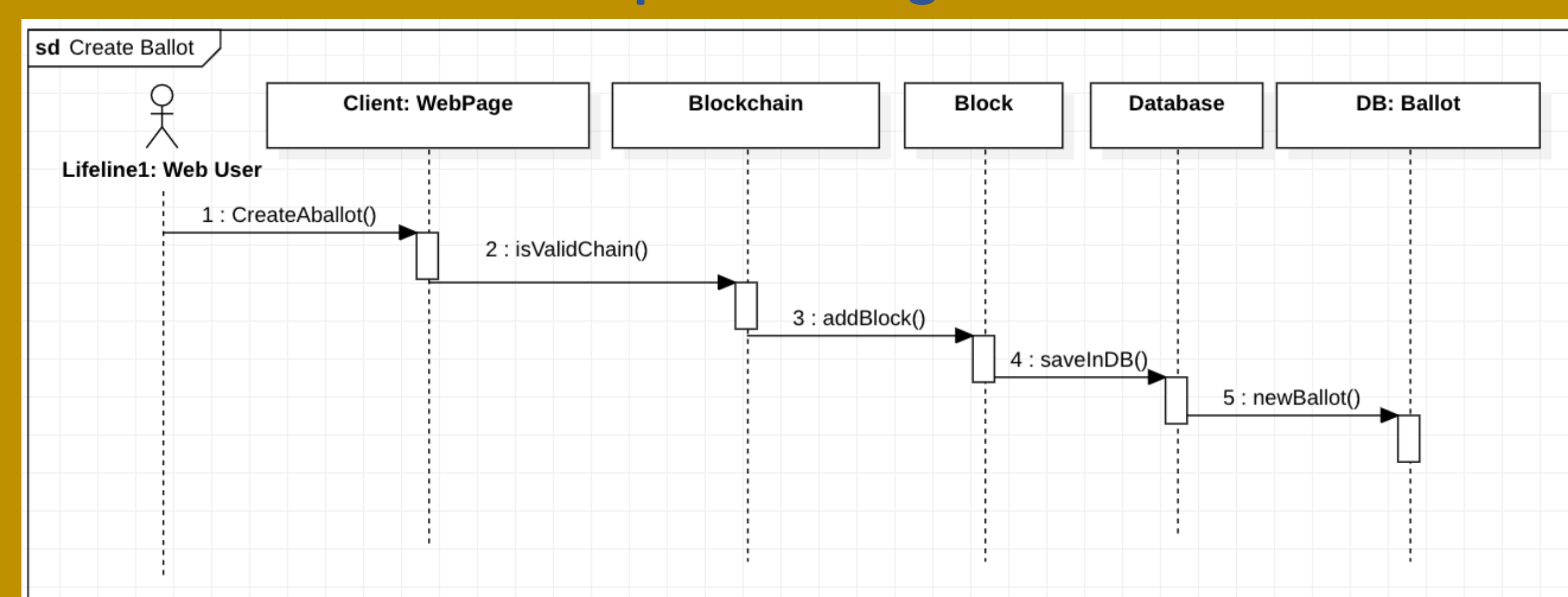


The blockchain is made with a linked list involving block objects. Each of these block objects have info stored for each ballot:

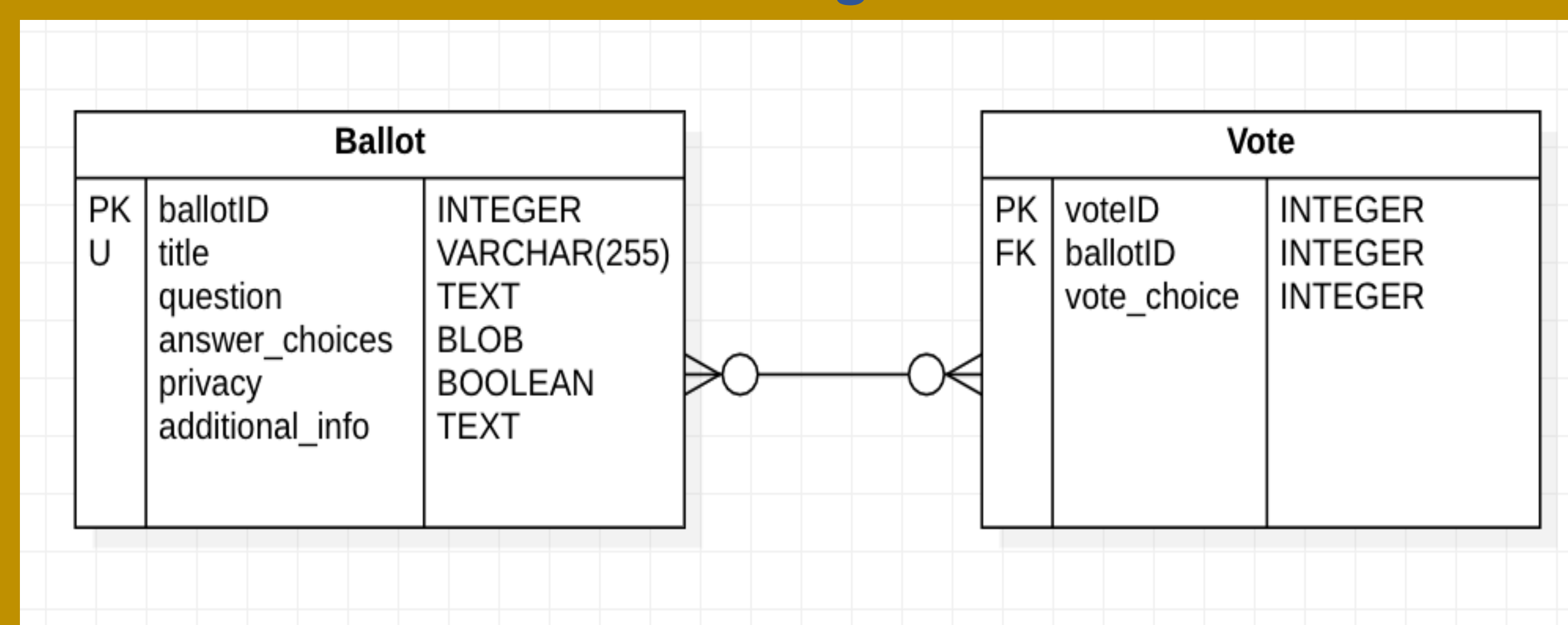
- Index
- Timestamp
- Poll Name
- IP Address
- Hash

The blockchain has a built-in verification system that is called each time a new block is added to the blockchain. A Genesis Block is created at the beginning of the blockchain with prefilled information, and each subsequent block will include the ballot information

Sequence Diagram



ER Diagram



REQUIREMENTS

- Knowledge in JavaScript, React, HTML, and CSS
- Understanding of blockchains and how they functions
- Knowledge to properly use GitHub

REFERENCES

GeeksforGeeks. (2022, August 3). Decentralized voting system using blockchain. GeeksforGeeks. Retrieved April 17, 2023, from <https://www.geeksforgeeks.org/decentralized-voting-system-using-blockchain/>

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