

CowChips4Charity

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Problem

The Boo Radley Foundation funds the research of diseases that are common between humans and household pets by hosting an event called CowChips4Charity at football games. This event is a bigger scaled version of cow chip bingo, where users try and guess where the cow will drop its chip. Currently the costs of doing the event in real life are too high.

Solution

Our team will develop a cross-platform web application for the CowChips4Charity event. The Boo Radley Foundation will use the web application to enable people to participate in the event. This will cut the cost of the event.

Intended Users and Uses

Boo Radley Foundation: manage games, analyze data
Participants: donate and play the game

Technical Software

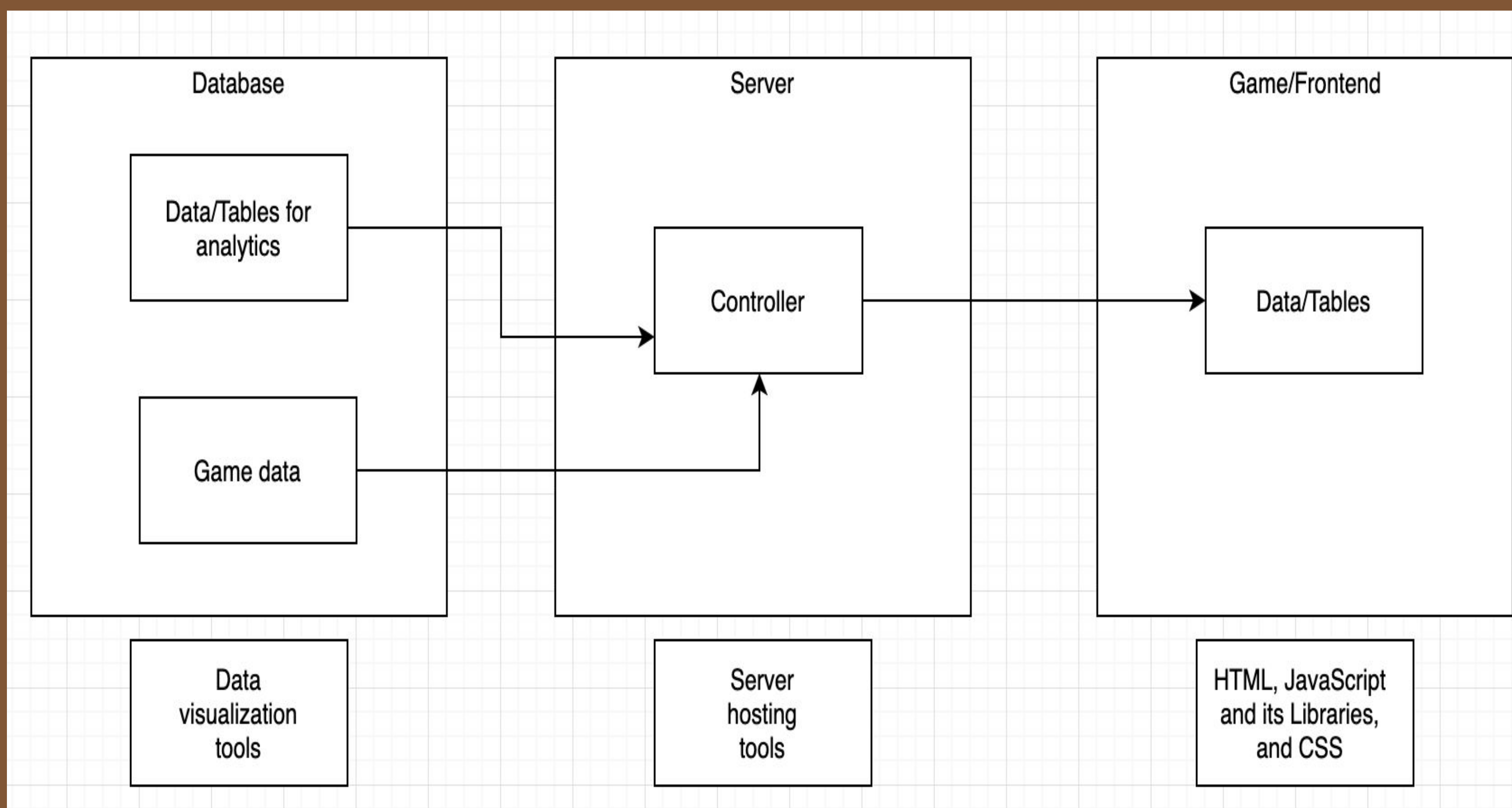
Node.js, Vue.js, Stripe, Heroku, Core UI, Express, mLab, AWS, MongoDB



Technical Functionality

Users will sign in, select the desired football game, and then select square(s) on the grid to buy. Once the user has at least one square selected they will then pay via credit card. This will occur all the way up to halftime during the football game. During halftime, participants will use our web app to watch the results. Our web app will then show an on-screen animation of a cow that defecates on a certain square in the grid. People who picked the winning square will then be notified that they won and to claim their prize.

Block Diagram



Functional

User

- choose a square(s)
- choose which game to watch
- watch the game live

Games

- choose an unbiased square
- inform which square won
- able to be run multiple games at once
- should last between 5-10 minutes
- have a limit to how late a user can choose a square(s)

Admin Panel

- see various data in the data panel (donations per game, the number of people who donated, donations per team, etc.)

Non-Functional

Website

- look aesthetically pleasing
- any device or browser

Security

- Credit card transaction will be encrypted

Usability

- Complete the transaction in one page of web app

Reliability

- 100% runtime during games

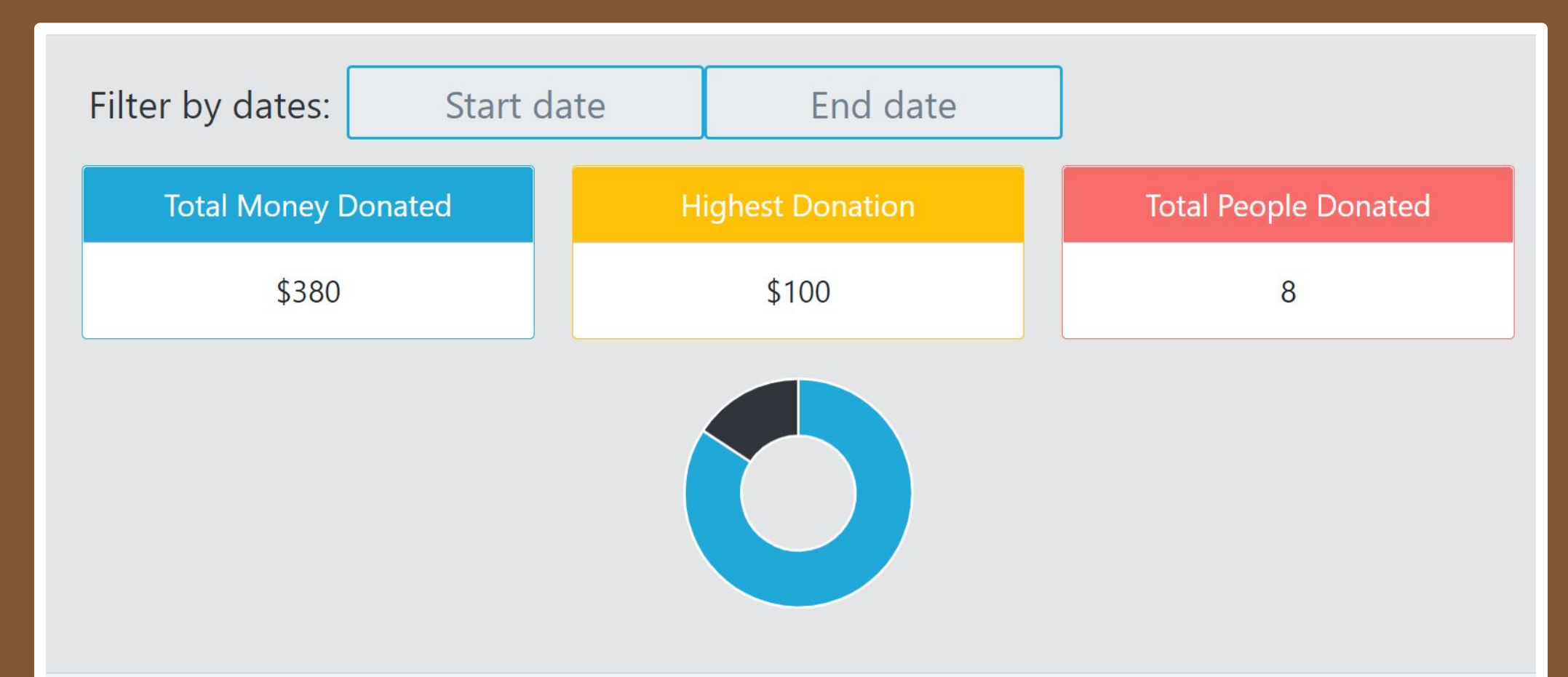
Operational

- Compliant with policies of set by the client

Performance

- scalability for many users
- login in less than 15 sec
- notify winner in 12 sec
- calculate cost of donation in 3 sec

Screens



Testing

We used TDD in our development. Our CI/CD pipeline is powered by Travis CI, with plugins to use Cypress and Jest. These run unit tests, and user simulation tests. Whenever a push is made, Travis spins up a build, and runs our library of automated tests on our new code. We inherited a large suite of tests that we're using to ensure we don't regress the application with any of our new additions.

Engineering Standards and Design Practices Op. Environment

Throughout the project we adhered to the organization standards of the Boo Radley Foundation by using the Foundation's logo and other supplied images throughout the renovation and updating of the website. We also had the constraint of continuing the production of the project with the design standards set by the past team.

Developed in Windows and Mac OS, intended audience is mobile web browsers