Design Documentation – Paper, Rock, Scissors: Showdown
Software Engineering
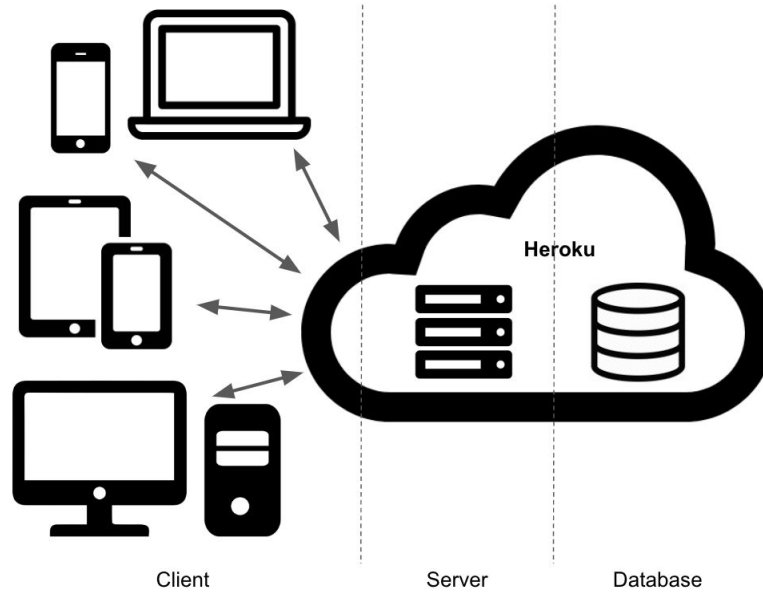
Link to project: prs-showdown.herokuapp.com/
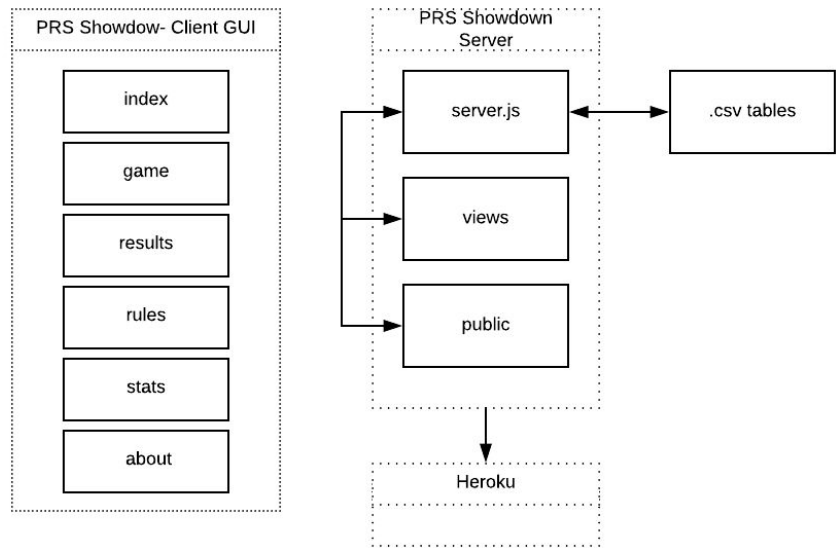
1. Architectural Design

1.1 Overview

Our system design is the standard client-server architecture common in web apps. It consists of several high-level components:

- **Client**: Any HTML5-compliant web browser
- **Server**: Heroku
- **Database:** Node fs -> .csv tables

Client   Server   Database

2. Low Level Design

2.1 Component Diagram

2.2 Data Diagram

2.2.1 `villains.csv`

villian_name	special	games_played	games_won	games_lost	paper	rock	scissors

2.2.2 `users.csv`

username	password	games_played	games_won	games_lost	paper	rock	scissors

3. User Interface Design

HEADER AND FOOTER:

Rock Paper Scissors

Play | About | Rules | **Stats** | World Association | Log Out

This website is brought to you by Charlie Cunningham and Anton Stengel

Have any questions? Contact us here
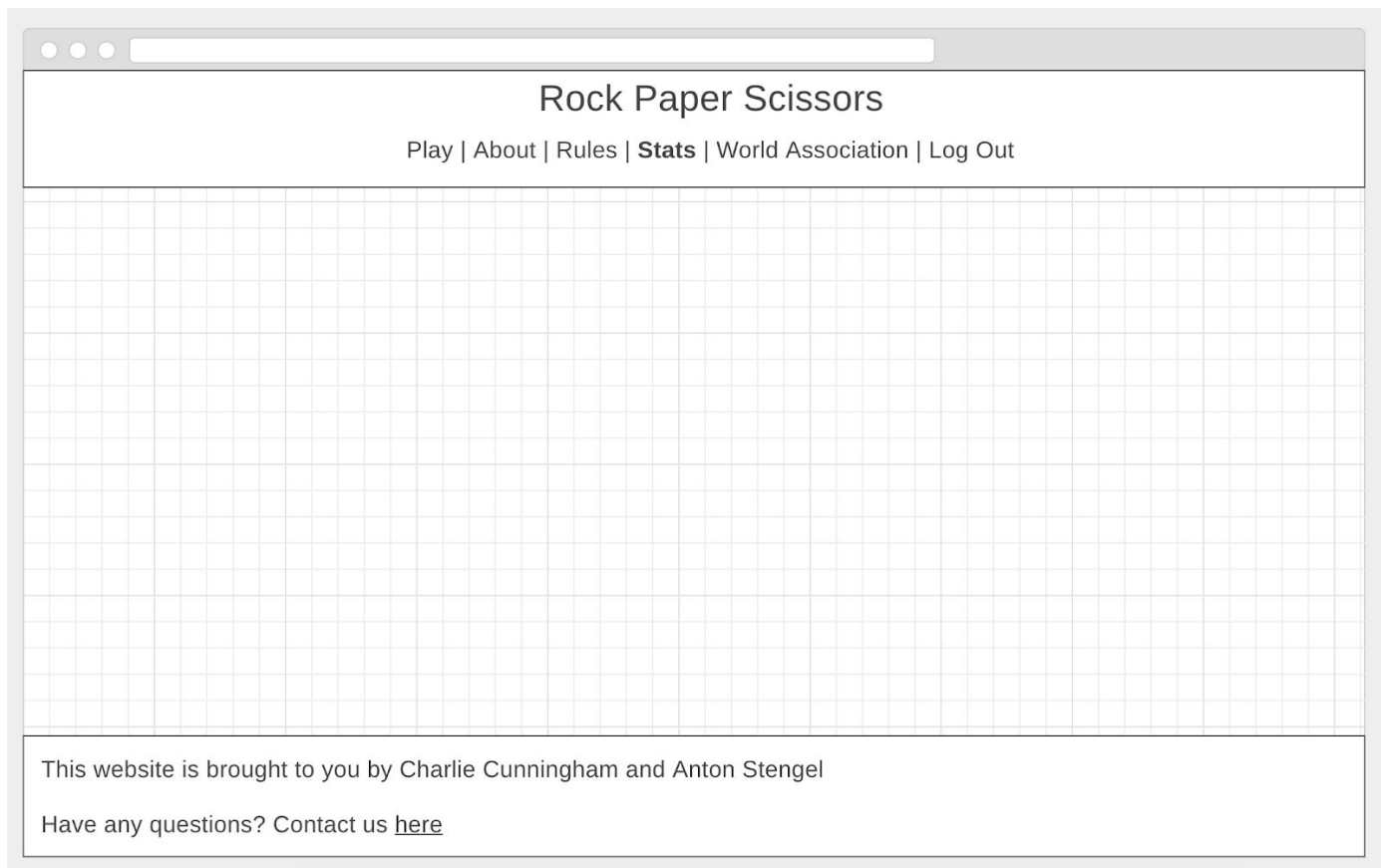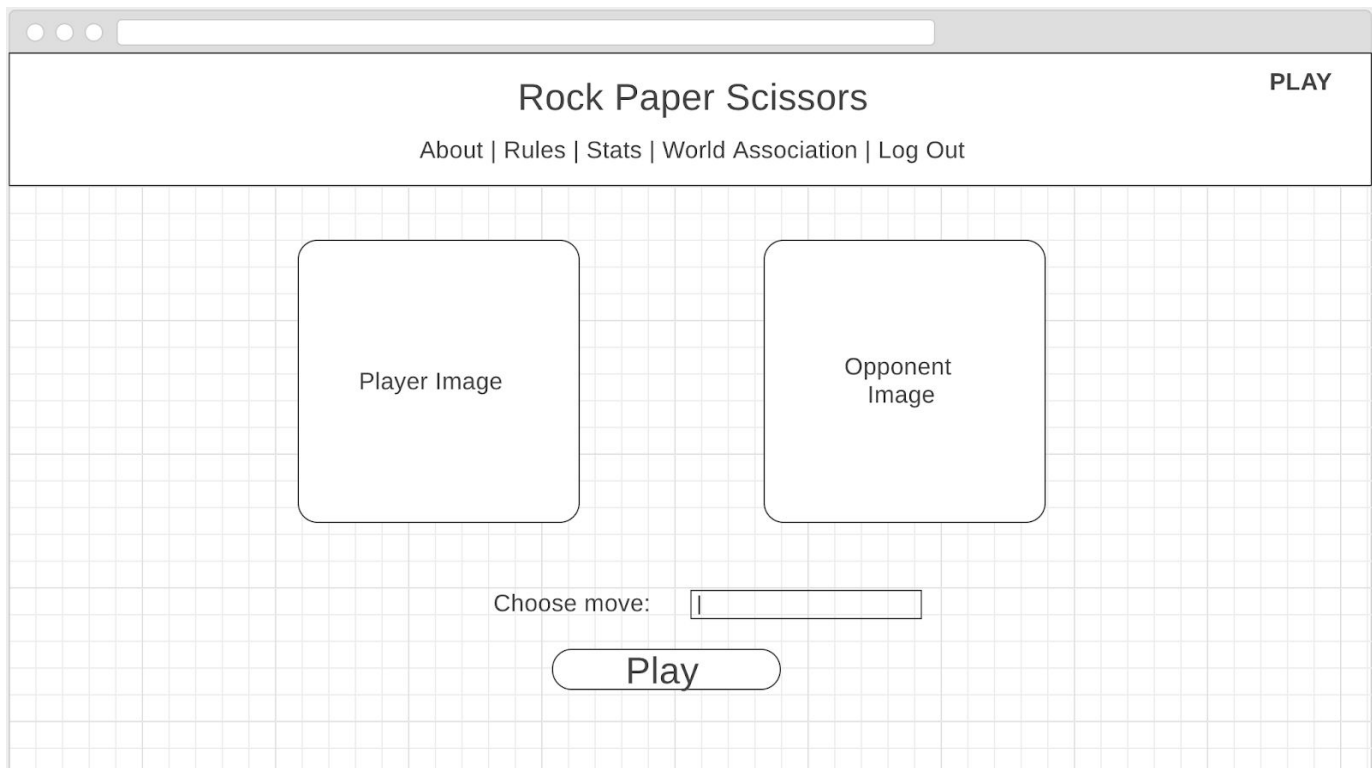
There will also be a header image right around where the "Rock Paper Scissors" title is

INDEX:
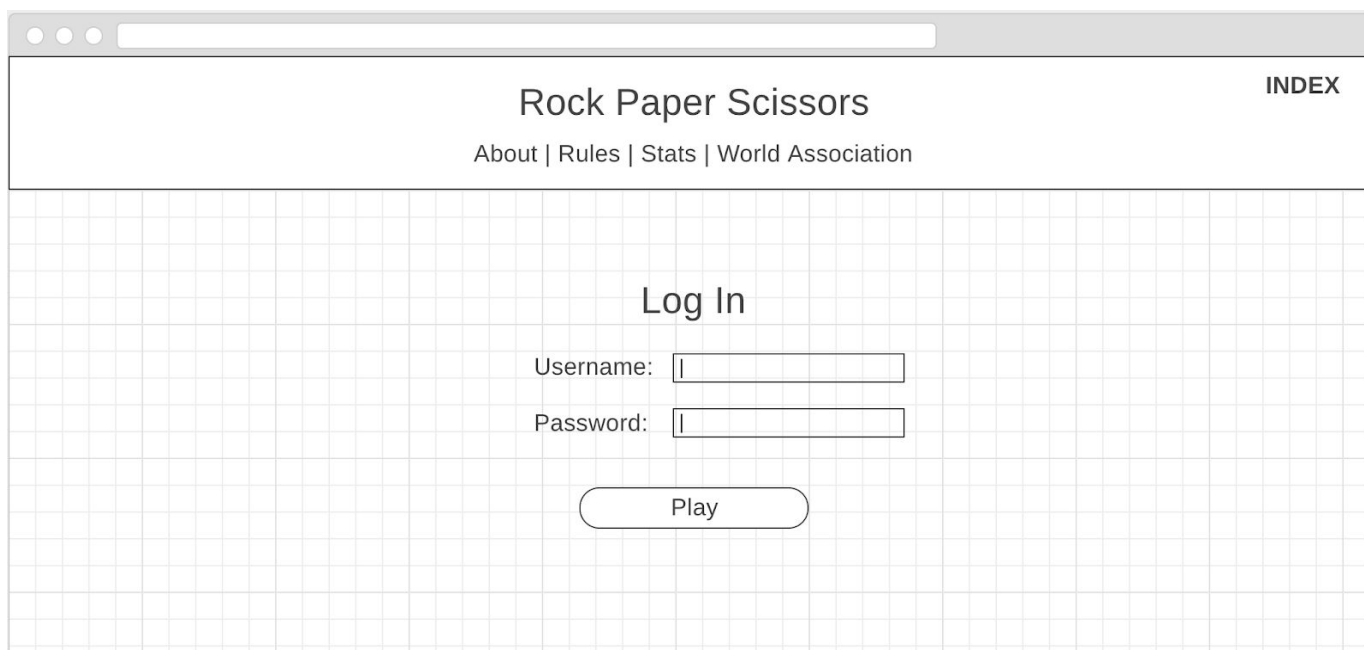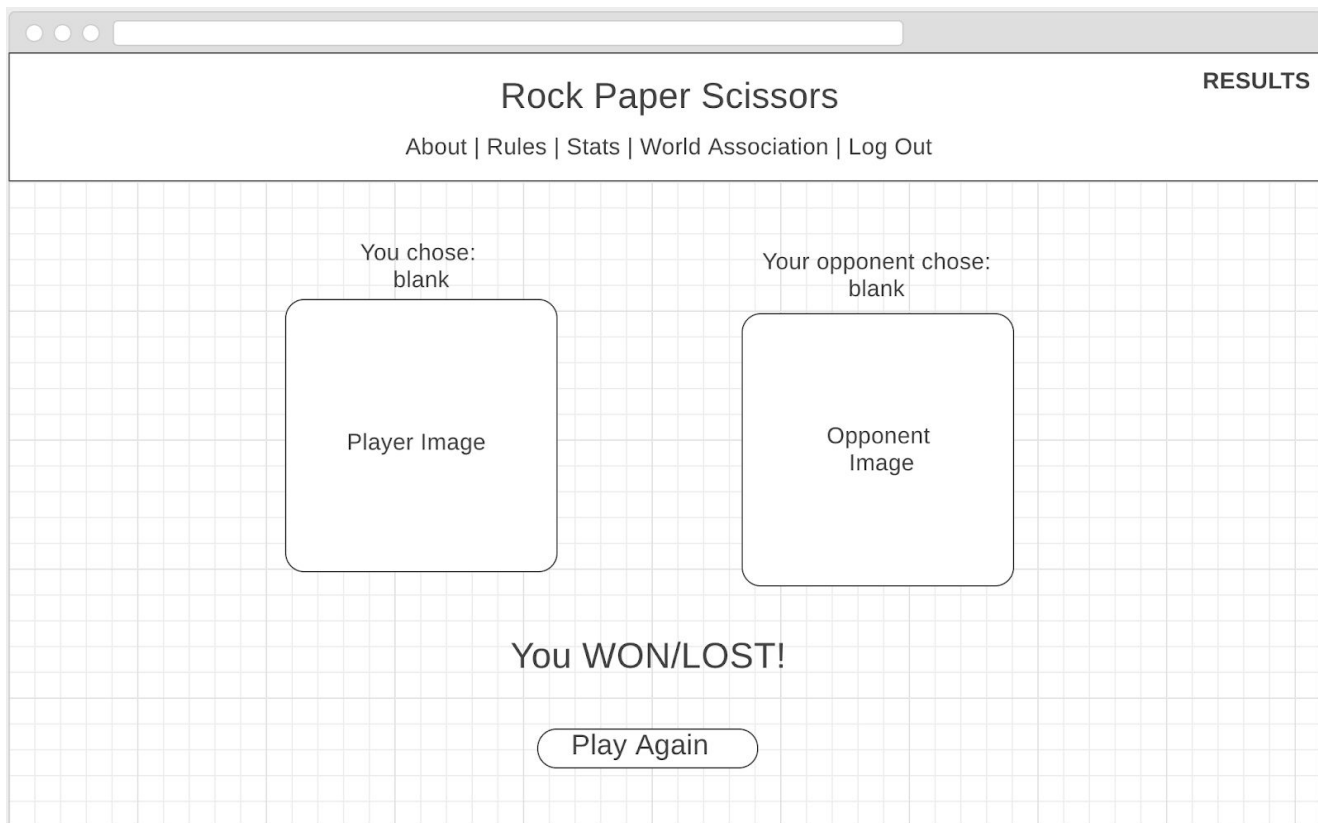
Rock Paper Scissors

INDEX

About | Rules | Stats | World Association

Log In

Username:

Password:

Play

PLAY/GAME:

Rock Paper Scissors

About | Rules | Stats | World Association | Log Out

Player Image

Opponent Image

Choose move:

Play

Dropdowns for villain and weapon

RESULTS:

Rock Paper Scissors

About | Rules | Stats | World Association | Log Out

You chose:
blank

Your opponent chose:
blank

Player Image

Opponent Image

You WON/LOST!

Play Again

STATS:

Rock Paper Scissors

Play | About | Rules | **Stats** | World Association | Log Out

THIS IS A TABLE

       Stat 1 | Stat 2 | Stat 3 | etc…
Player:
opponent:
opp 2:
opp 3:
opp 4:
opp 5:
opp 6:
etc:

its hard to make a table…
*the order of the players is ranked by a point system. A number next to their name will display where they are in the order. Something like the first five players will be shown and then all of the opponents, so it could look something like this:
(1) player
(2) player
(3) opponent
(4) player
(12) opponent

ABOUT:

Rock Paper Scissors

Play | **About** | Rules | Stats | World Association | Log Out

This app is meant to demonstrate the basic concepts necessary to run an Express server.

All villain images downloaded with permission from the Noun Project.

Any other neccessary about information

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4. Routing Table

4.1 server.js

Note: we made a few changes to the original routing table (most of which we discussed with you)

HTTP ACTION	Route	Query Parameters	Result
GET	`/`	n/a	**index.ejs**
GET	`/rules`	n/a	**rules.ejs**
GET	`/stats`	**username (only if you are logged in)**	**stats.ejs**
GET	`/about`	n/a	**about.ejs**
GET	`/login`	**player_name, player_password**	**game.ejs**
GET	`/:user/results`	**weapon, villain**	**results.ejs**
GET	`/game`	n/a	**game.ejs**
GET	`/contact`	n/a	**contact.ejs**

5. Who Does What

- **Anton**
  - Design Documentation
    - Wireframe
    - Routing Table
    - Data Tables
  - Client Side
    - Most of CSS
    - Login form, game form
  - Server Side
    - User stats
    - Everything to do with villains stats and special strategies
- **Charley**
  - Design Documentation
    - Who Does What
    - Notable Features
    - Intentional Deviations from the Rubric
  - Client Side
    - Local storage username handling
    - SVG coloring
    - Referee
  - Server Side
    - Base game mechanics (computing wins/losses/ties and handling those events)
    - Login handling

6. Notable Features

- Dynamically Colored SVGs
- Referee
- Forms won't let you submit a blank response
- Automatic log-in if you have logged in before (and haven't logged out)
- Automatic log-out (and local storage is cleared) if your local-storage username doesn't exist in the server
- You can visit all pages except for game when you are not logged in
  - Log in button displays at top of the screen when you are not logged in and not on the login page
- Stats page only has 20 rows; it shows all villains and reserves the rest of the rows for users.
  - If you are logged in, you are reserved a spot on the stats page and your row is highlighted.
  - If you are not logged in you can still view the stats page
- To sign up for a new account, visit the log-in page and type your desired username and password into the form. If your desired username is taken, the page will report that the entered password was incorrect (unless you enter the correct password for the taken account, in which case you are rewarded with a headstart on your stats). In future versions, we could make a more secure and intuitive sign-up form.
- All pages scale well so you can play our game on browsers of all size and shape (and you can even play it on mobile)
- No deprecated tags or attributes (like center, in-line style, in-line script, or on-click)

7. Intentional Deviations from the Rubric

- Routing table modified slightly
- Wireframe designs not updated to match current web design (with permission from Mr. Gohde)
- Rank on the leaderboard is determined by a scoring system that awards 3 points for a win, 1 point for a tie, and 0 points for a loss (instead of win percentage)
    - That way the best way to climb the leaderboard is to play more (and generate more ad revenue for us)
- Note that icon files are automatically generated by macOS (we aren't using some different programming language)