

Problem Overview

Build a simple server & frontend presenting a user with a 20x20 grid of squares the user can "draw" on to create a simple design.

Development Requirements

- Use the latest stable build of Rails
- Use the latest stable build of Ruby
- Use rbenv as the Ruby Version Management tool
- Git commits should be small and incremental as if the project were being written as production code
- Please ensure tests can run in Chrome or Safari
- Please run through documentation steps to ensure project works as intended
- Please ensure code is cleanly written and self-documenting as well as any comments are clear

Project Requirements

- All users should be presented with a shared board
- Each user should have a palette of colors to choose from
- Clicking on a square, colors the square in with the user's currently selected color
- A visitor can overwrite the color of a previously-colored square (set by a different visitor or themselves)
- Each visitor to the site should be assigned a randomly generated username (there does **not** need to be any login or authentication), which should be shown to that visitor
- Hovering over a colored in square should display in some way which user placed that color, and when it was placed
- The board should intermittently update to reflect any changes other users have made
- Appropriate testing should be in place

Optional Challenges

Please note: the below challenges are *optional*. Partial implementations that break the solution will not be considered.

- Display a leaderboard of which users have placed the most colors, and what those users' favorite (most used) colors are
- Assign the same username to the visitor across refreshes/ visits
- Implement the frontend with a one-way data binding framework
- Update the board in realtime using websockets