

Picross MP

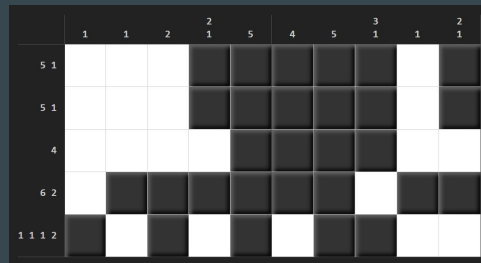


App Development Project

<https://github.com/fischly/picross-mp>

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Motivation



- Got hooked on a game named **Picross (Nonogram)**
- Played it a lot against friends
- Wanted to improve it to be more **mobile friendly**
- Wanted to implement a **multiplayer mode**

Frontend - Apache Cordova

- Targets **multiple platforms** with a **single code base**
- Applications are written in **HTML/CSS/JS**
- Node.js toolchain for building applications
- For Android, uses a WebView to display the app

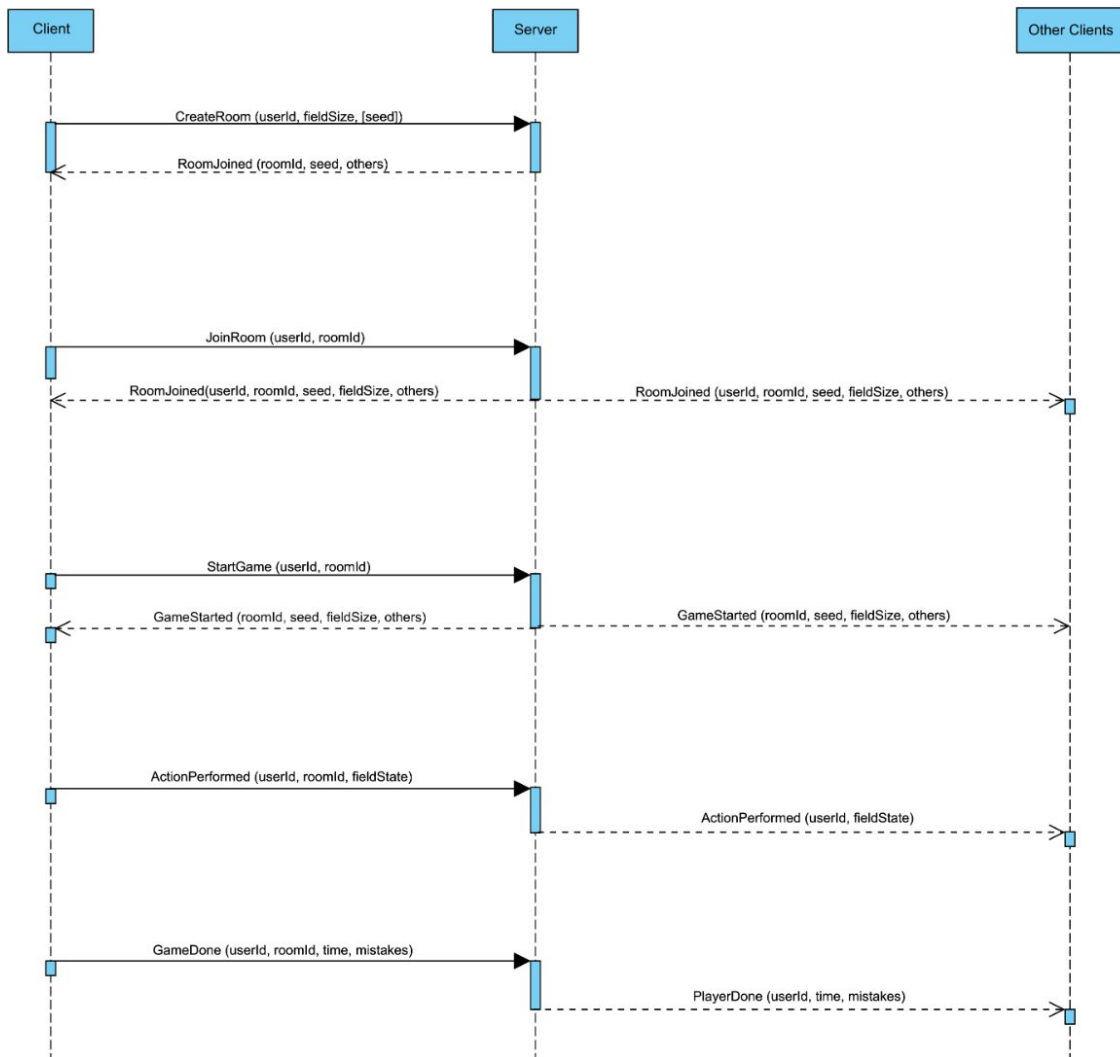
Backend

- Node.js server
- Communication using WebSockets
- **State-based** and **request-response** protocol

Protocol

Image in Repo:

[Link](#)



Advantages of using Apache Cordova

- **Multiplatform** (same code base everywhere)
- Advantages of HTML/CSS/JS
 - Can easily render and style a **table** (which is perfect for this kind of game)
 - Easy to **dynamically transform** and **colorize** elements (i.e.: CSS :hovered)
 - Straight forward interface for socket communication (**WebSockets**)
 - Event-based architecture
 - A lot of great JS and CSS **libraries** that are really easy to include
- Can easily be extended by writing plugins
- Fast **debugging/testing** in desktop browser

Disadvantages of using Apache Cordova

- A few things are **not** that **well documented**
- **Gesture-detection** not implemented in browsers (yet), so rely on plugins
 - So if you need fine-grained gesture control: better go native!
- Disadvantages of HTML/CSS/JS:
 - Native code probably **runs** considerably **faster** than JS code inside a WebView
 - JS is **not** that **great for project structuring** (alternative: TypeScript)
 - JS implementations sometimes **not consistent** between browser vendors/versions
- Browser zoom/pan behavior is weird on not adjustable on mobile