Web-Based Multiplayer Tic-Tac-Toe

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Project Goals

- Web-based application
- Network Compatibility
- User Interactivity

In short, a multiplayer online game!

Background

- Completed a project together in SoftSys last year

- Wanted to move forward but in WebDev style

- Started with a simple game and would scope higher if time allowed

Code Structure

- Used base JS (HTML to outline and Javascript to programmatically generate features), and CSS to style

- Used Node JS for server hosting capabilities and internal testing

- Hosted the app on Heroku
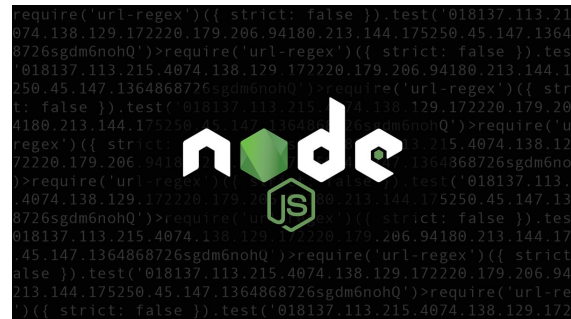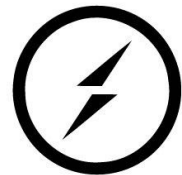
Socket.io

- JS library that allows for bi-directional communication

- Client-side library runs on the browser while the server-side runs through Node JS

- Allows for efficient sending of data in the form of JSON-style dictionaries

App Components - Server

Handles updating clients when states change due to user input
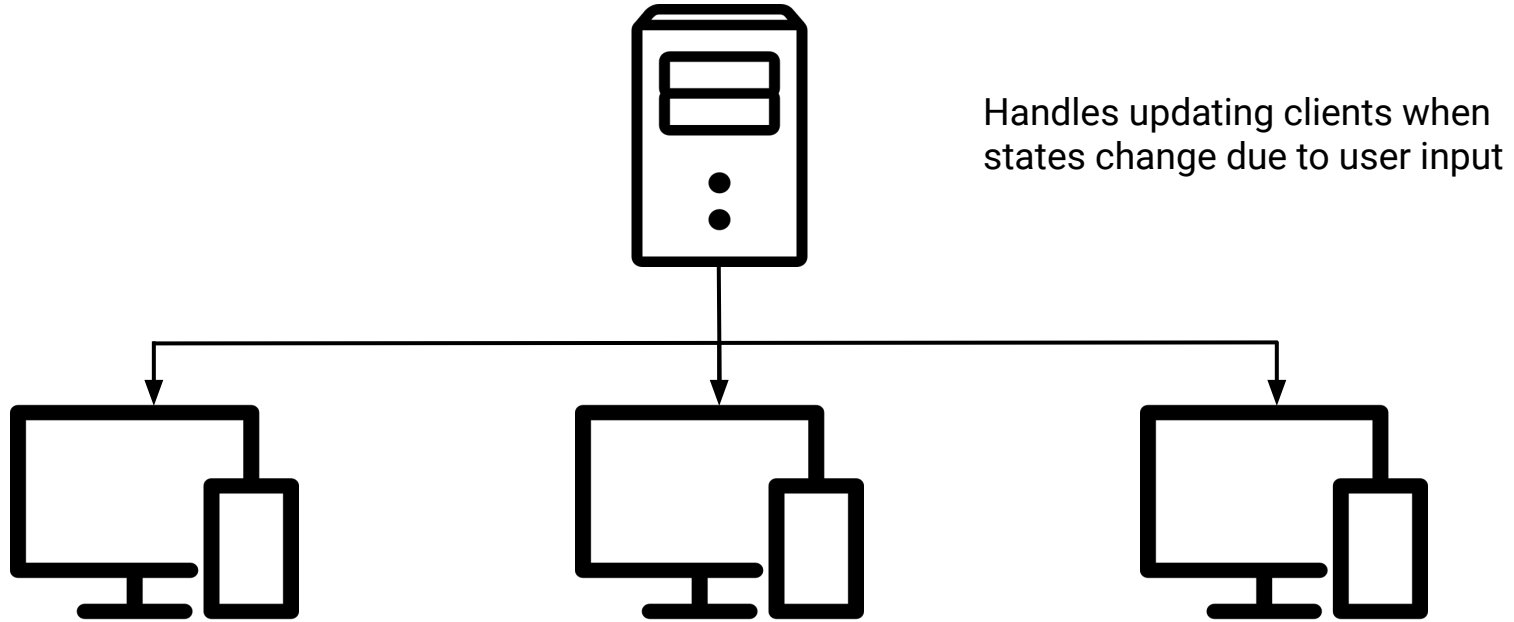
Server-Side Behaviors

- Holds and moderates data related to game state

- Interprets user inputs and determines if they are valid

- Sends updates to all clients once actions have been made

App Components - Client

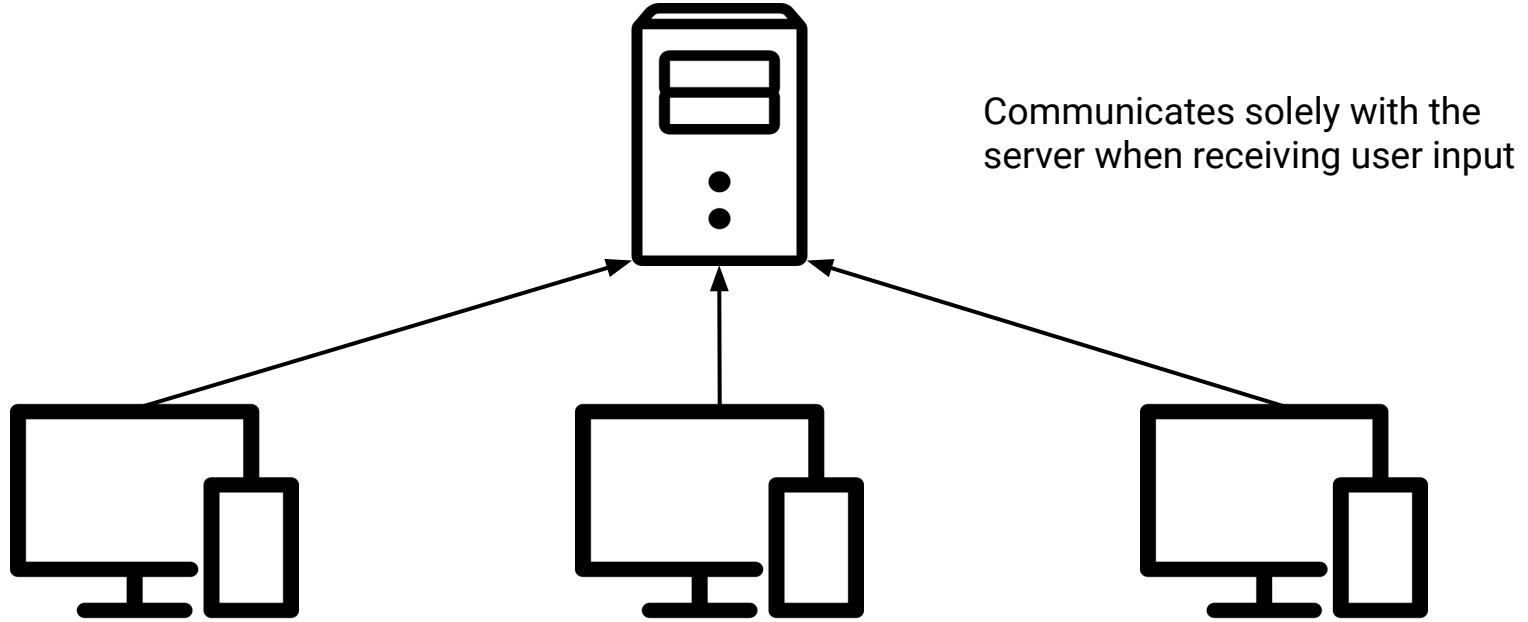Communicates solely with the server when receiving user input

Client-Side Behaviors

- Acts solely as a visual front for users to interact with

- Extra users become spectators and are placed in a waitlist

- Functionality is strictly reliant on behaviors acting in the correct order
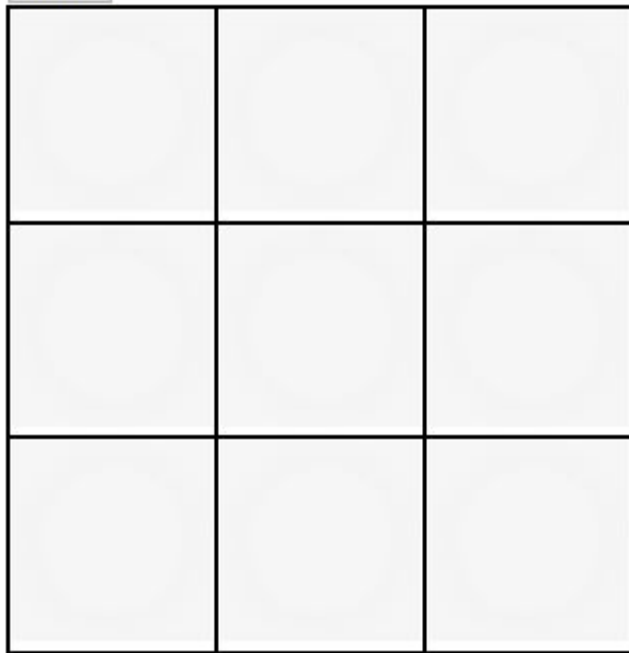
Product Progression

whatup

Start

You are Player 2

It is Player 1's turn

Reset

Reset

You are Player 1

It is Player 2's turn

Demo Time

https://sheltered-everglades-61700.herokuapp.com/

Future Steps

- Equip the app to handle multiple rooms of players playing simultaneous games of Tic-Tac-Toe

- Make the front-end more visually appealing (currently fairly empty)

- Move forward with a game with more interactive user input, and more complexity than tic-tac-toe

Questions?