**Battleship coding project**

**Programming Challenge**

* Build a two player battleship game as a web app

**Project Requirements**

* You can use any framework or library that you are comfortable with
* You can use publicly available libraries with MIT or comparable licenses for web app components
* When the user refreshes the browser, the game returns the same state it was in previously (it doesn't restart the game)

**Game Requirements and Rules**

* Battleship rules as outlined in the classic battleship game (with a twist)
* Grid should be of size 8x8
* There should be 4 boats for each team, but they need to be the shapes of tetris blocks
* "L" shape (3 tall, 2 wide at boot), block (2x2), and two lines (4x1)
* It should have a lobby with a start button to start the game
* The ships are randomly placed on the grid to start
* The game is turn based, so player 1 only sees their grid and their shots in player 2's water with their hits and sunk ships. When it is player 2's turn, they see their grid and ships, and player 1's water with their hits and sunk ships
* A move should involve firing a shot by clicking on other player's grid, and if on a boat, hitting it
* If a boat has been hit on each grid space, it is sunk
* The player who fired the shot should be informed if a shot hits or misses, and also should be informed if they have sunk a ship, and if so, what ship has been sunk
* The game should have a reset button to restart to the "lobby" state (beginning of game with no state)
* The game should switch to an end state if one team loses all their ships. The end game state should show who won, total shots fired, ships sunk for both players, and include a restart button

**What we are looking for**

* We will primarily judge the application based on functionality
* This includes game mechanics, well organized code, sensible design decisions
* The game should work and we should not be able to put the game into a bad state
* We care that the UI makes sense and looks reasonable
* The web app should work on desktop computers

Note: In cases that the game requirements are not clear, feel free to interpret them as seems reasonable to you to provide a sensible game experience. Please make sure to document those assumptions.