List of bugs

1. Hardware

* LEDs will blink slowly when looking for a game. Upon joining a game the LEDs will blink rapidly. This rapid blinking will continue even after the game is over.

1. Before joining a game

* Unable to find game. Connection issues.

1. During a game

* [None at the moment]

1. After a game

* [None at the moment]

1. Website

* Can create and join a game with no hardware.
* Games in progress have an indefinite duration.
* If a single game is in progress, that game is displayed on every instance of the website.
* Can register new guns and usernames while a game is in progress. [Test this with hardware]
* Can register an indefinite amount of new guns and usernames. [till max storage capacity]
* The php does not handle single apostrophes (‘) in usernames.
* Usernames have no restrictions. Can be a single character or indefinitely large.
* You cannot play multiple games simultaneously. This is an issue if other people want to play but another game is already in progress.
* When creating a new username, if an invalid name has been entered you are prompted “[username] already exists” instead of giving a valid message such as “invalid username”.
* When creating a new username, you may enter html tags. These html tags can be registered as a new user and will show on the webpage with the intended design of the html tag (e.g. <p>I’m a paragraph!</p>).
* When creating a new username, you may write scripts that will be accepted by the website (e.g. <script>let i = 1; while (i != 0){ alert(i);}</script>). Browsers, such as chrome, will notice this script and prevent the webpage from displaying. This could be a massive security issue if the browser security is bypassed.
* When creating a new username, I entered the following: alert(“Howdy!”);

This caused the entire website to freeze and prevented navigation to other tabs.

The only way to abort is to kill the browser from the console or by using Task Manager. This may be fixed by manually deleting the username from the database.

* When a user has not played in a game, selecting “view individual game stats” just shows a blank screen. This should display something like “[username] has no stats”.
* Somehow, users “Thomas” and “Benjamin” have exactly 1 shot recorded, but no individual game stats. Apparently, a user can register a shot without being in a game.
* If a user creates a game, but doesn’t join, other users may join the game and begin playing without the user that created the game since you may not join a game that is in progress.
* Anyone that has access to the website can terminate a game in progress. Access to termination should only be available to users that are actively in a game.
* Usernames are not posted in chronological order. In a test of mine, I created a user named “tom” and later made another user “tom1”. On the website, it shows “tom1” posted above “tom”. I extended this further by making a user named “1” (which shouldn’t be allowed) and this new user “1” was posted on the website above user “tom1”. Overall, this may be less of a bug and more of a design choice.
* A user can create a game and leave the website without joining the game. The interface for “open and waiting for players to join” remains on the website for an indefinite duration. This should be automatically terminated after 1-2 minutes if a game is never started. Furthermore, a single user can join a game and stay in the game for an indefinite duration. The game should be limited to a certain amount of time (say five minutes). Perhaps we could implement a queue instead of allowing players to create and join a game on their own whim.
* Once a game is created, it must be played. There is no option to abort.