GameShare Working Prototype Known Problems Report

GameShare Team
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1. ## Player can still shoot when despawned
   a. Input/action: when player shoots between dying and respawning
   b. Fault location: src/play/engine.js
   c. Possible solution: assert that player can only shoot when alive i.e. health > 0.

2. ## Issues with spawning location: can spawn in objects or be stuck between an object and wall
   a. Input/action: when player is put into the game
   b. Fault location: src/play/engine.js
   c. Possible solution: a new spawning function that checks the location that the player will spawn to against where the walls and objects are.

3. ## Poor Mobile Compatibility:
   a. Input/action: when view the site on a mobile or tablet screen
   b. Fault location: src/styles/styles.scss, views/edit.pug, views/play.pug, probably more files
   c. Possible solution: unknown. Not sure if the games should be playable and editable on mobile, would have to add more mechanics (such as an HTML joystick) to the game and editor.

4. ## Responsive Styling Bug:
   a. Input/action: When on home page on mobile screen size and open menu, then go back to desktop screen size, browse games button no longer visible
      ➤ Unlikely that the users will notice this issue, but styling is brittle
   b. Fault location: src/styles/styles.scss
   c. Possible solution: make the dropdown menu color blue so that it is not necessary to change the button color at all.

5. Intermittent Networking Issues
   a. Input/action: Loss of network connectivity can cause various unpredictable behaviors. For example, if a client minimizes or closes their game window after shooting, the bullets will no longer be tracked accurately, and will not act as intended.
   b. Fault location: src/engine.js
   c. Possible solution: Rewrite app to use server-side validation for all actions and synchronization, instead of relying on clients.

6. Updating game when server is running create's new game instance but let's players stay on old instance
   a. Input/action: If players are on a server and the owner updates the game, the changes don't show up until players refresh the page
   b. Fault location: src/play/engine.js
   c. Possible solution: Automatically refresh the page when server finds changes in game

7. Inactive players' games do not update, do not behave normally
   a. Input/action: When player leaves game window, phaser does not update so bullets move indefinitely/players don't die/etc.
   b. Fault location: src/play/engine.js.
   c. Possible solution: Phaser might have a setting to update while out of focus

8. If an object group has a destructible wall, all walls in the group become destructible regardless of individual health settings.
   a. Input/action: In level editor, set an object in a group to have health, and leave the other objects without health. All walls in the group will be destructible.
   b. Fault location: src/play/engine.js
   c. Possible solution: Make destructible status a group setting instead of individual objects.

9. Player can join a game multiple times with the same account
   a. Input/action: If logged into GameShare, can open multiple windows with a game. A new tank associated with the account is created for each window.
   b. Fault location: src/play/engine.js

    c.   Possible solution: Add a check to make sure players do not have the same name

10. Walls that are destroyed prior to player joining a game will render and act as a solid wall

    a.   Input/action: Go into a game with destructible walls and destroy one. Then have another player enter the game. The wall will be there and still interact with collision for that player.
    b.   Fault location: src/play/engine.js
    c.   Possible solution: Create a state that will update when a player is in a game currently.

11. Player signed in will still get prompted for username

    a.   Input/action: If logged into GameShare, upon opening a game the user will still be prompted to input a username, as a guest user. However, if the user reloads or cancels, their account username will then display.
    b.   Fault location: src/play.js
    c.   Possible solution: Get user's information earlier, maybe add a different kind of check in src/utils/db.js

12. Travis CI doesn't pass tests that the tests pass locally

    a.   Input/action: Tests pass locally, but because of security issues Travis cannot login to Google, so the tests fail.
    b.   Fault location: unknown.
    c.   Possible solution: unknown, may need to find a workaround for security issue.