

Gitae Park, Vivian Graeber (PM), Samson Wu, Matthew Yee (GASM)

SoftDev

2023-06-13

Target Ship Date: 2023-06-13

Possible Game Names:

Bark Souls

Super Smack Bros

Push 'Em Off!

The Last of Shove

Abstract:

Our idea is to create a .io style multiplayer 2D top-view fighting game. The game is opened through the browser, and features open lobbies of 20 that can be joined and left freely. Each player controls a circle which represents them in the game, with the objective of eliminating other players by knocking them off the edges of the map. Each player is equipped with a stick/some kind of weapon that they use to hit other players off the map. Combat will be knockback-based, with no health bars or damage values existing in the game. The game features no progression system or accounts.

1. Program Components

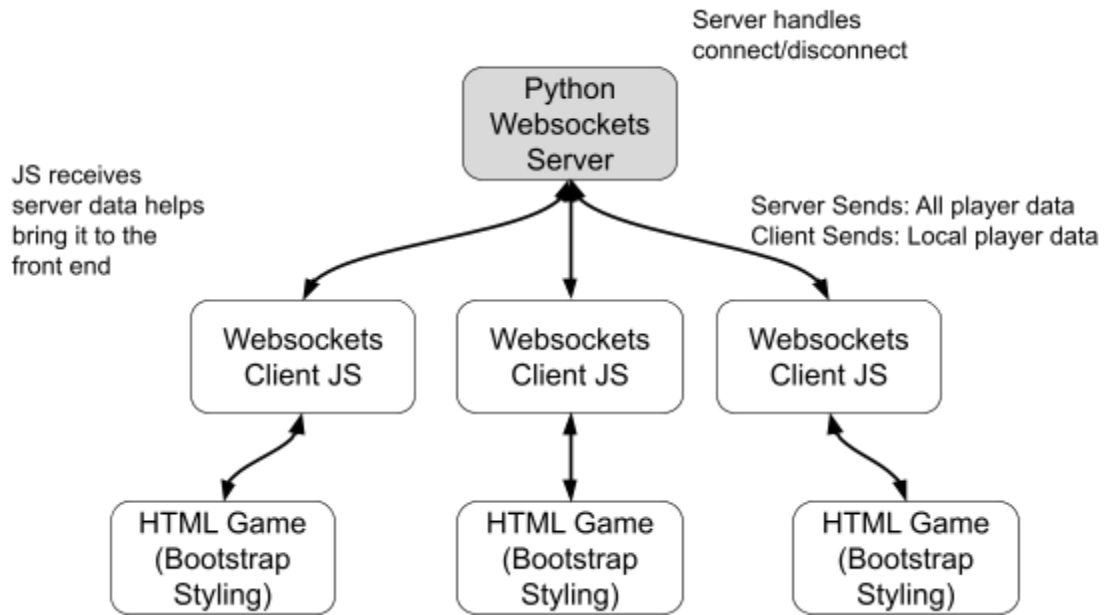
1) Game Page

- Menu on top of the ongoing game in the background
 - Allows users to enter an optional username
 - Allows users to switch servers
 - Allows users to choose a class/skins (stretch goal)
 - Play button makes user join the game
- Display's user's own avatar and avatars of other players in real time
- Features a leaderboard and a killfeed for the lobby
- Has a popup that appears when a user is knocked off the map that shows the high score they achieved before death
- Not zoomable

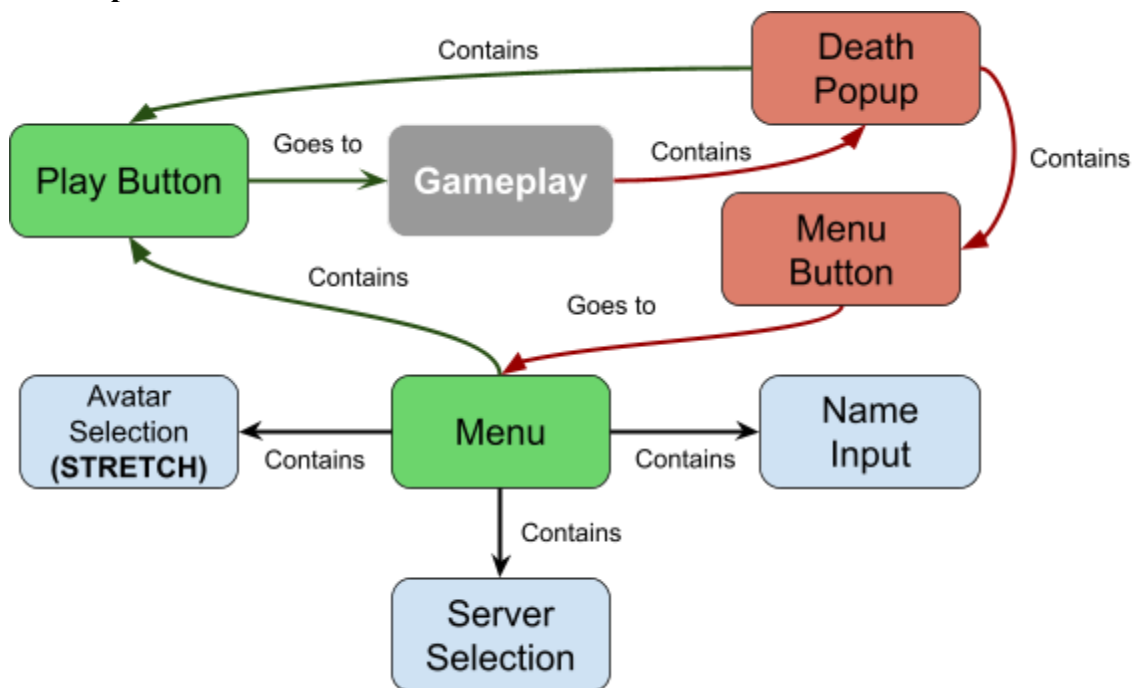
2) Python Server(s)

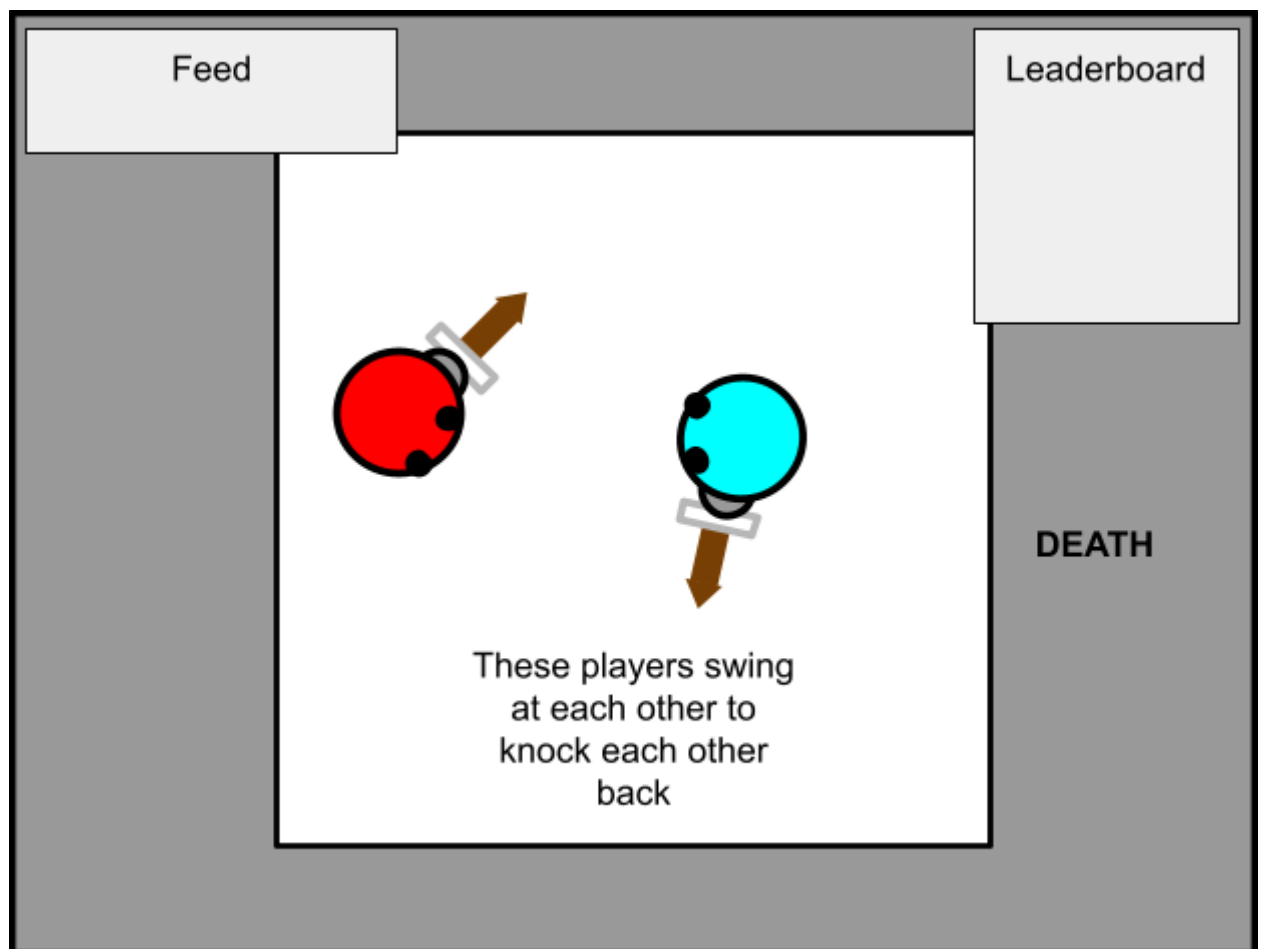
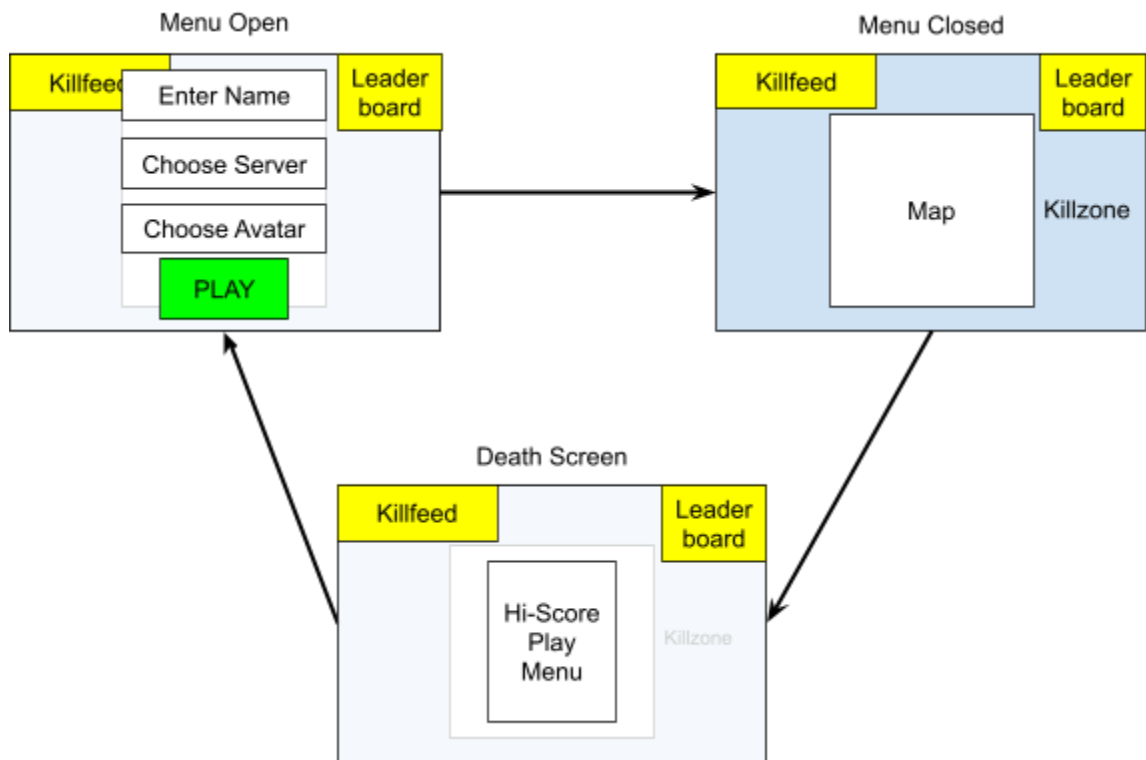
- Powered by websockets library
- Handles when players join/leave
- Collects data about all players and sends all the data at every client

2. Component Map



3. Site Map





4. Front-End Framework

We chose Bootstrap because we prefer it as it is slightly more simpler than Foundation. Our front end framework only serves to make our UI pretty.

5. Task Breakdown

Matthew Yee

- ☐ Add basic physics
 - ☐ Acceleration/velocity based movement system
 - ☐ Pressing WASD keys accelerates the player in a certain direction
 - ☐ Max velocity in any given direction
- ☐ Add the stick (weapon)
 - ☐ Add the controls for the stick
 - ☐ Add collision for the stick
 - ☐ Add force for stick

Vivian Graeber

- ☐ Work on score
 - ☐ Kill goes to the last player to touch the deceased; if nobody did it goes to no one
- ☐ Work on killfeed
 - ☐ Real-time updates of when someone gets pushed off the map
 - ☐ Detect whether someone is killed, suicides, or leaves the game
- ☐ If we are able, add the display of the avatar on the leaderboard and killfeed

Gitae Park

- ☐ Design frontend of site
 - ☐ UI Animations
 - ☐ Menus fading in
 - ☐ Buttons changing color when hovered
 - ☐ Rounded UI edges
 - ☐ Appealing UI padding
 - ☐ Dark mode
- ☐ Player customization
 - ☐ Allow the player to select what color they want their circle and stick to be

Samson Wu

- ☐ Comment current code
- ☐ Split the long unreadable js file into multiple modules for better readability
- ☐ Debugging
 - ☐ Fix server having trouble recognizing when a player leaves
 - ☐ Fix when people with faster monitors move faster
 - ☐ Fix when player tabs out they won't budge
 - ☐ Fix false successful connection

- ☐ Fix any potential exploits by using the console in browser
- ☐ Handle lobbies
 - ☐ Add lobby player cap
 - ☐ Create a popup telling the player to wait if the lobbies are full