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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

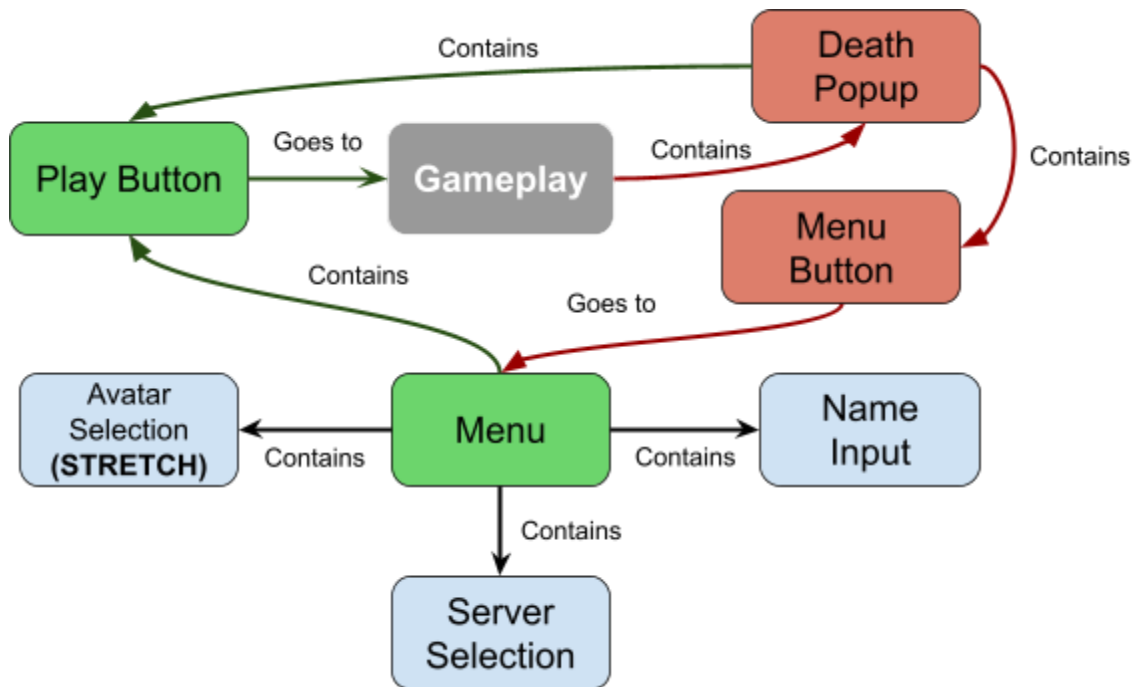
1) Game Page

- 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

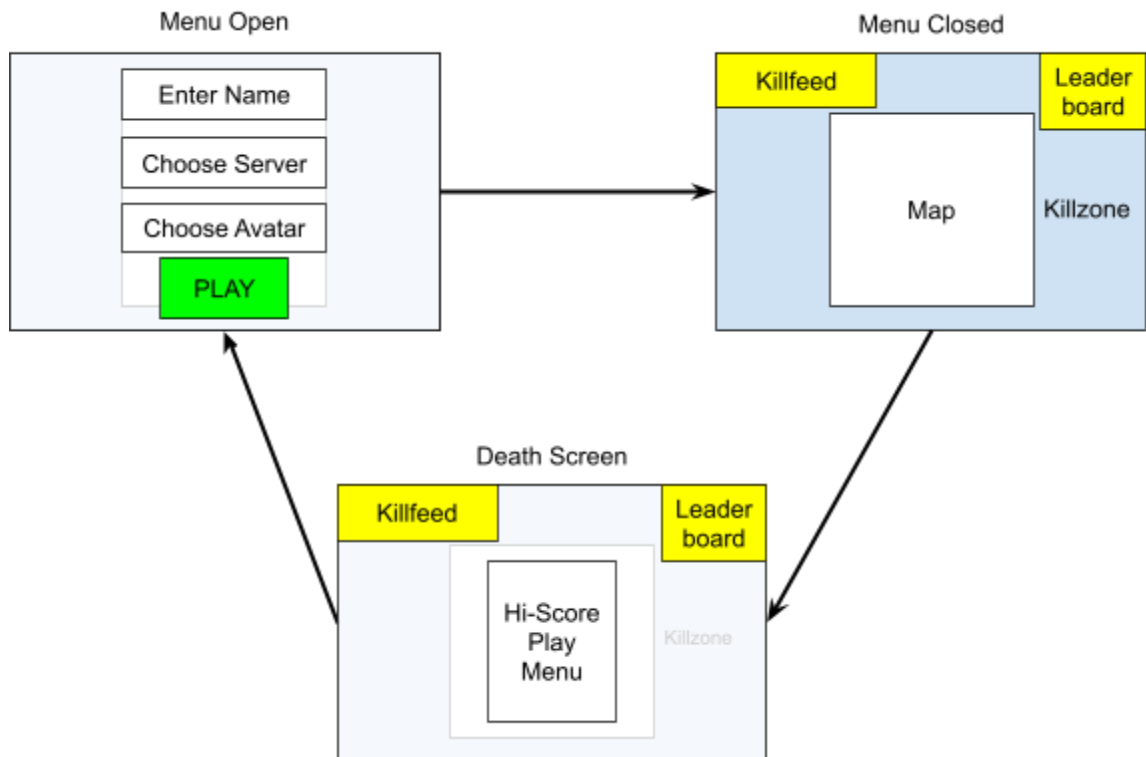
2) Python Server(s)

- 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

Bootstrap

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
 - ☐ 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