Emilio Barradas, Andrew Zheng, David Long, Inbang Seo

CS307: Project Charter - Team #19

Problem Statement:

21% of American adults are illiterate/functionally illiterate. Our goal is to build "wordblast.io", a turn-based word typing game where players must type a word that contains a given word combination. We believe that it is a fun and simple word game to develop our citizen's spelling, reading, and typing abilities with a high potential to be popular. In addition, existing implementations do not take the traditional easy-to-use .io game approach. We will build this implementation.

Project Objectives:

- Build a website with a user interface that allows for players to play wordblast with random players.
- Support a "play with friends" option in which players can host and share private lobbies.
- Create a user registration system to allow for easier lobby sharing.
- Implement a ranking/leaderboard system to reflect the skill of a player.

Stakeholders:

Users: Players of the worldblast.io website.
Developers: Our team, Emilio Barradas, Andrew Zheng, David Long, Inbang Seo
Project Coordinator: Danielle Xie
Project Owner: Danielle Xie, Emilio Barradas, Andrew Zheng, David Long, Inbang Seo

Deliverables:

- wordblast.io, a clean and functional frontend website which will connect all of the following systems.
- An authentication system where players can create and manage their accounts.
- A leaderboard page where the high ranking players will be displayed.
- The backend game management system for creating and tracking private and public games. This system will also perform matchmaking for players in the public game queue.
- A server-to-client socket system to host and synchronize game state with all clients and compare user inputs to a pool of words
- The frontend will be built using Nextjs, built on top of React. The backend will be built using Spring.
- Both the frontend and backend will be put into their own docker containers and will be hosted on a cloud service provider like AWS or GCP.
- Data from all systems will be stored in a MongoDB database.