



Introduction

Tug of Words is an online IO game that focuses on typing skills. Tug of Words is based upon individual and team based contributions from typing random words correctly in a timely manner. There are two modes of gameplay, public and private. Public gameplay sorts a user into a random team for a subset of all users online at a given point in time; private gameplay allows a user to create a new game in which other users can only access it via a shared link. Private games also allow users to pick their own teams. In order for a team to win, they simply must type the most words correctly before the game terminates. The game terminates when the score difference between two teams becomes significant, or one team repeatedly types words incorrectly in succession.

System Requirements

- Chrome or Safari on a computer (not supported on mobile)
- Internet connection

Test Setup

The link provided by the development team will redirect to the error filled version of the application. The link corresponds to a fully deployed application, connected to an empty database. All configuration and connectivity protocols will be completed and in place by the development team prior to the testing team gaining access to the link.

Program Structure

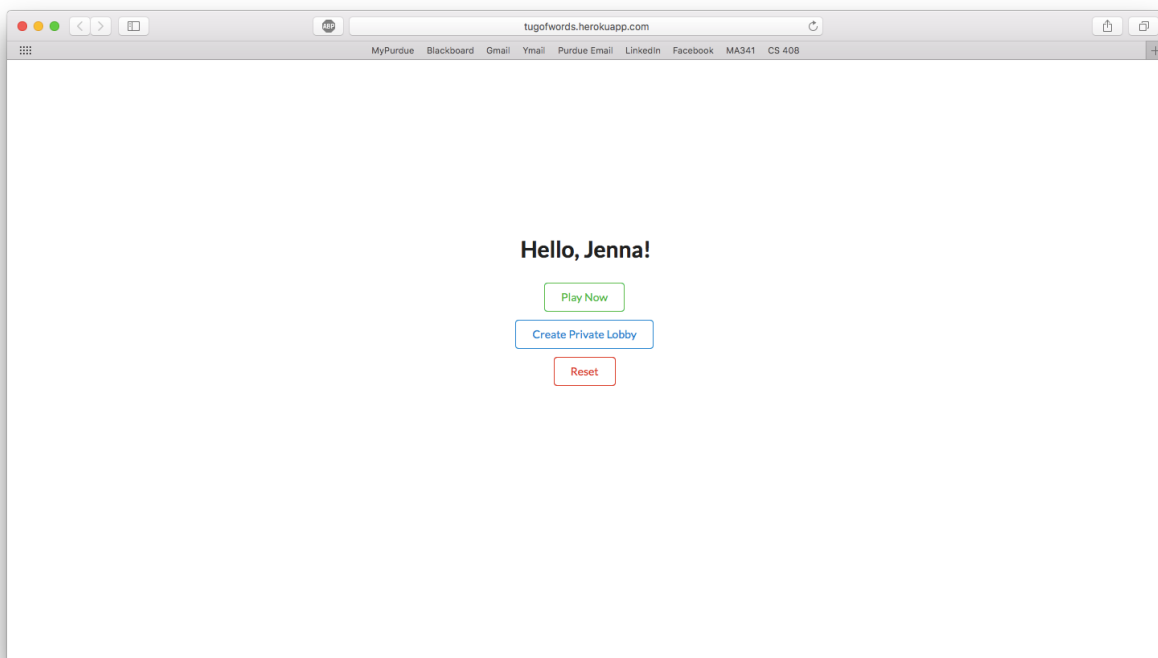
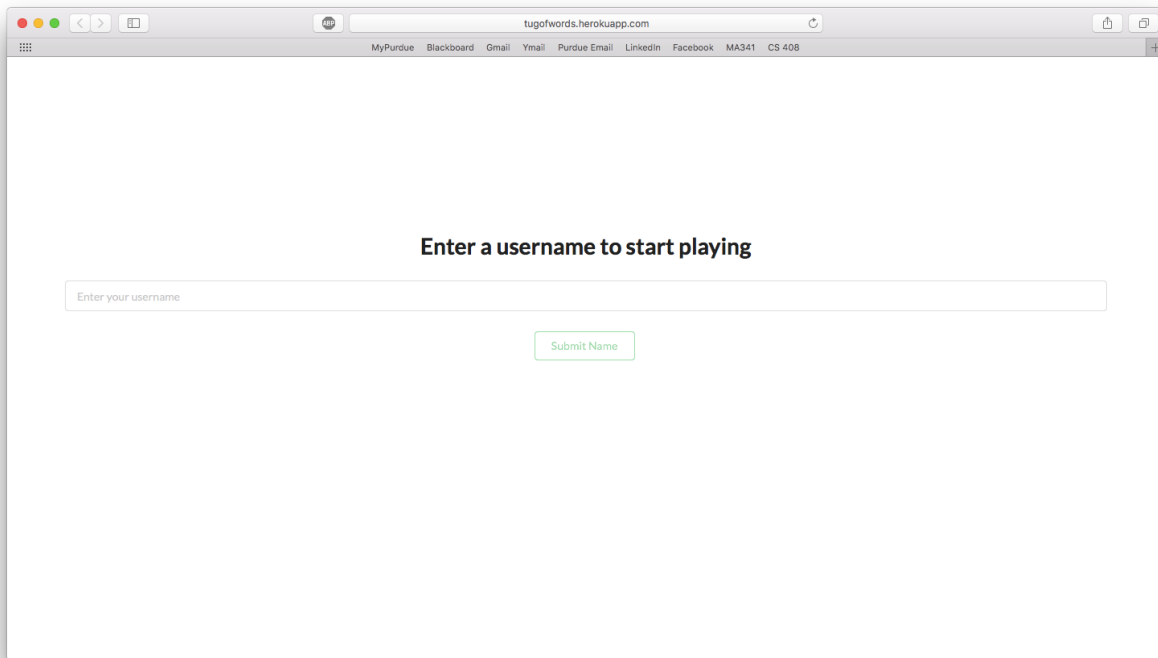
The application is divided into two major components, client and server. Both client and server contain the same abstractions of major application features that define their overall structure.

Main Menu

The main menu module and container (on the server and client respectively) contain the following functionality:

- Username input and submission
- Join a public lobby
- Create a private lobby
- Reset username

The following screenshots display all of the main menu functionality:



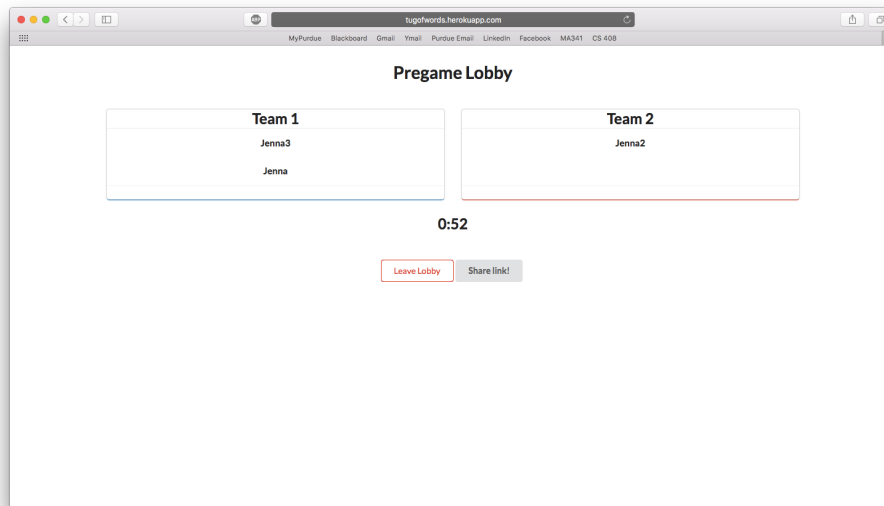
Lobby

The lobby container and module contain the following functionality:

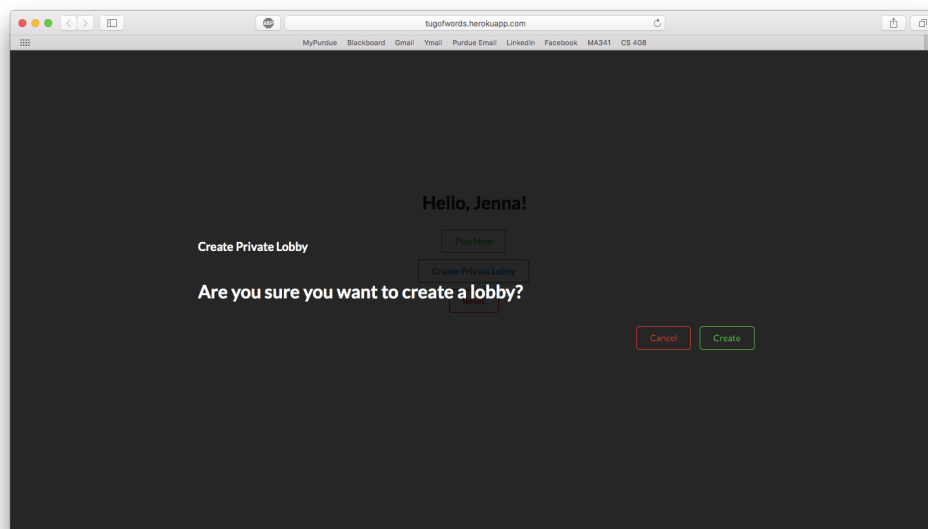
- Join/get assigned to a team
- Start game via start button or start game via timer
- View other users on your team and on opposing team
- Leave lobby to not participate in game

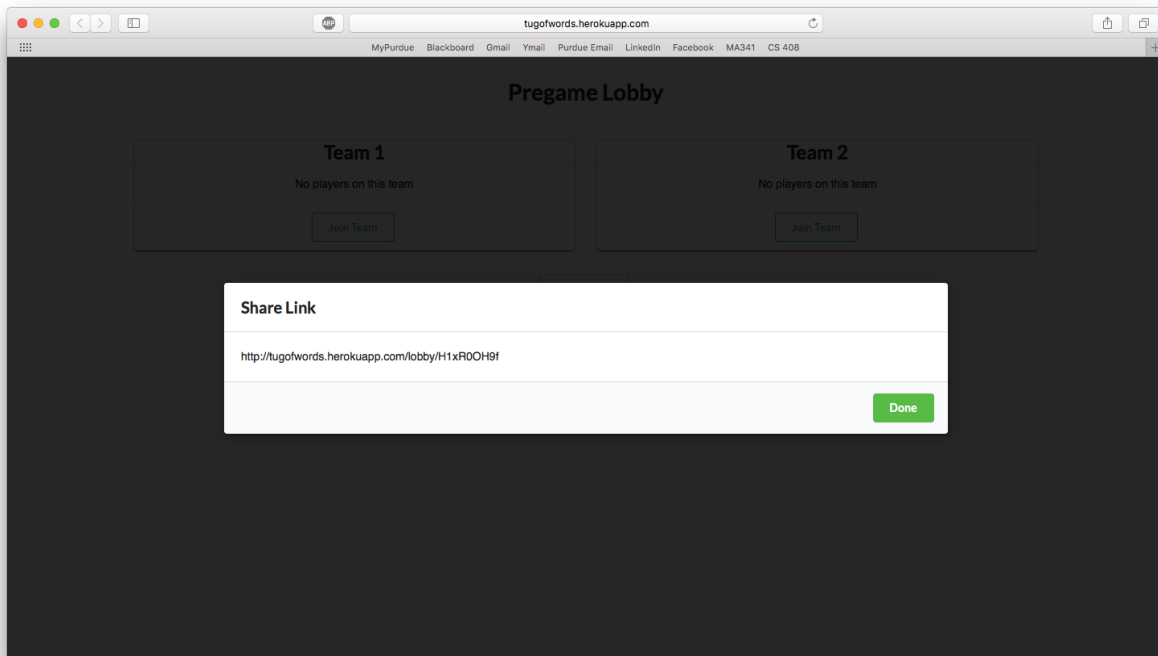
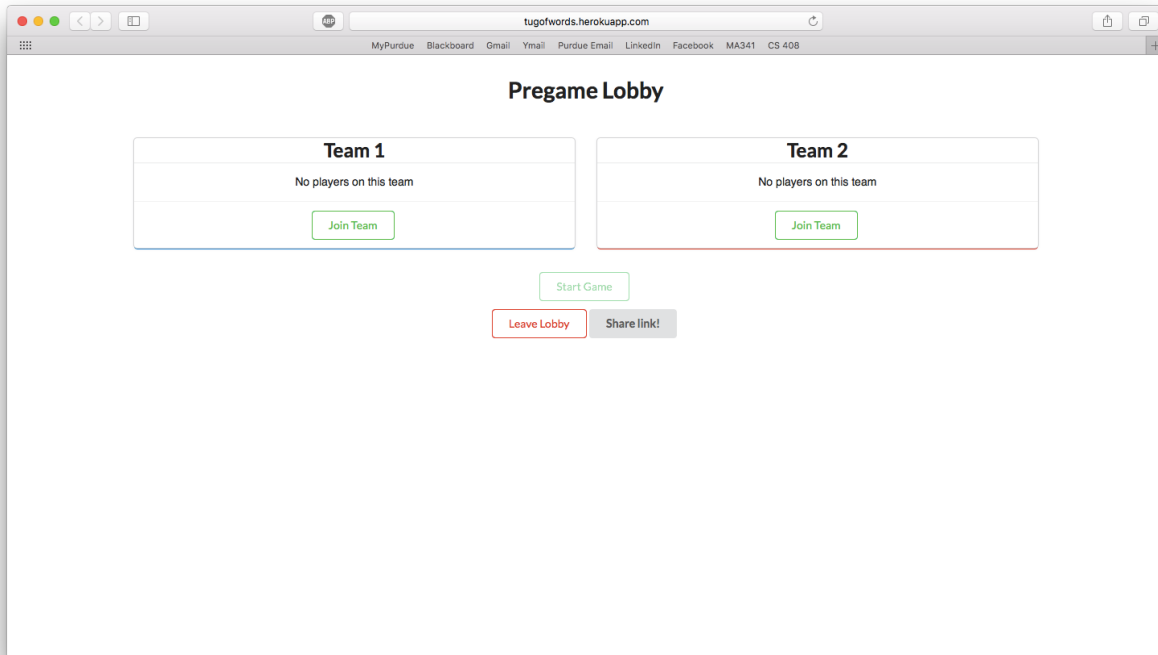
The following screenshots display the lobby functionality:

Public Lobby



Private Lobby



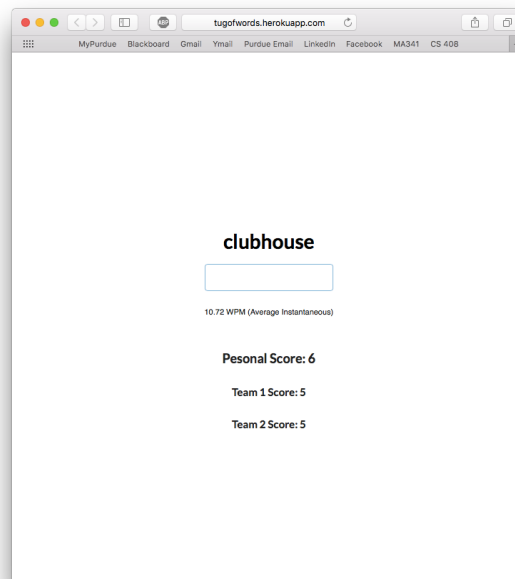
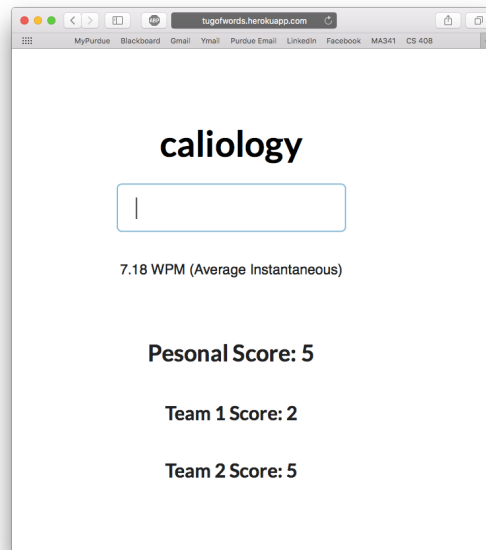


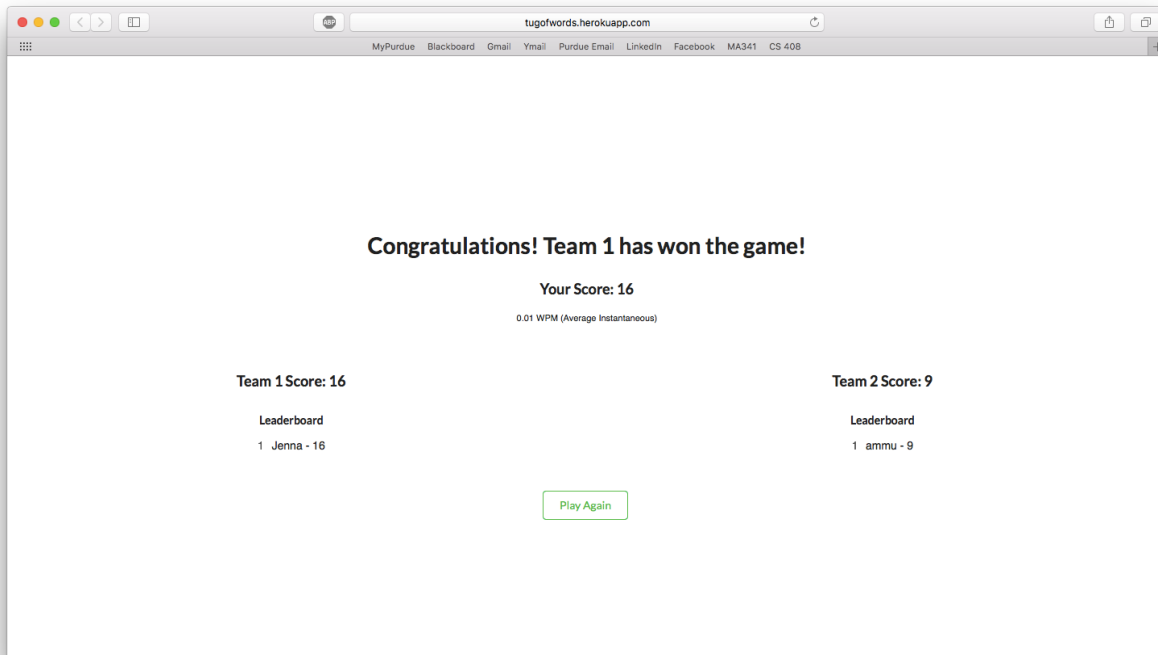
Game

The game container and module contain the following functionality:

- Generate random words
- Allow user to type in words
- Check if user's input matches word spelling
- Update team and individual user scores
- Calculate and display instantaneous typing speed (WPM)
- Determine when to end the game
- Display post game information

The following screenshots display some of the in game functionality:





Non-interface functions

There are no non-interface functions included in our application.

Basic Operation

The following sections describe common user interactions with the product. For testing purposes, we recommend following a distinct testing protocol for public and private games separately.

Game Tag Creation

Users create their screen name through the main menu interface.

1. Navigate to website
2. Type desired screen name
3. Click 'Submit Name'

Public Lobby Joining

Users opt to join a random game by moving through the public lobby interface. All public lobby joining is done after creating and submitting a username.

1. Follow username submission protocol.
2. Select 'Play Now'.
3. Remain on public lobby screen until countdown reaches zero.
4. Once countdown reaches zero, the game will start.

Private Lobby Creation

Users may opt to create a private lobby that is only accessible via a specific url. All private lobby creation is done after creating and submitting a username.

1. Follow username submission protocol.
2. Select 'Create Private Lobby'
3. Select 'Create' from dialog screen.
4. Select 'Share Link' and copy the link and send to other friends.
5. Select your desired team by clicking 'Join Team'.

Private Lobby Joining

Users who receive the link generated from the private lobby creation instructions will do the following:

1. Prompted by the initial main menu screen, the user will follow the username submission instructions.
2. Select 'Join Team' under desired teams component of the screen.
3. When ready, any one user in the private lobby may select 'Start Game' to begin gameplay.

In Game Activity

User who have followed the protocol for either public lobby or private lobby activities will enter the game. In game activity is as follows:

1. Upon the timer reaching zero in a public lobby, the game starts. In a private lobby, once the 'Start Game' button is clicked, the game starts.
2. The user must click on the text box in the center of the screen.
3. Type the word shown above the text box as fast as possible.
4. Hit enter to submit your word, and a new word will be displayed above the text box.
5. Upon submitting a word, the word is checked for spelling, and the user's score and team's score is updated accordingly.

Post Game Activity

Upon completing the game, the user will be redirected to a post-game screen.

1. View individual point information and typing speed statistics.
2. View team point information and user contribution on teams.
3. View the game winner based upon point contributions.
4. Select 'Play Again' to return to the main menu screen.

Additional Instructions

In order to effectively test this game, being able to reset your local browser storage is necessary.

Instructions for Chrome:

1. Open Inspect Element
2. Select 'Application'
3. Right click 'Local Storage' and select 'Clear'.

Instructions for Safari:

1. Enable developer tools (found in Safari Preferences under Advanced)
2. Open Inspect Element
3. Select 'Storage'
4. Open 'Local Storage'
5. Delete each key in local storage to reset local browser storage