Capstone Project Poster

OneVOne

A one on one fantasy sports experience for both the casual and dedicated sports fans.

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Computer Science

Abstract:

The goal of this project is to create an application that highlights the best features of fantasy basketball while also making it convenient and easy to operate from the user perspective. One of the main problems we discovered with other fantasy applications is that they require a large amount of the user's time on a regular basis in order to be successful in their respective leagues. This is something the average person may not be able to participate in due to outside factors such as a job and family obligations. In order to address this issue our application is centered on one night commitment fantasy picks where two people go against each other by picking one player each and whichever player performs better and has more fantasy points wins the matchup. The fantasy points are earned based on the all-around stats from that player in that specific game and go through an internal application scaling system to determine exactly who many they receive. The one night commitment system solves the problem that most users who would like to participate in fantasy sports but simply do not have the time and allows them to enjoy the same experience, while being free to choose when they want to participate freely and not be penalized for it.

Introduction

OneVOne is an online fantasy sports application that focuses on the Nation Basketball Association otherwise known as the NBA. Other fantasy applications focus on longer seasons that include creating a league with your friends or just anyone who wants to participate, and the members of that league go head to head multiple times throughout the season and the person with the best record at the end wins that season and whatever the prize is. This creates a problem for the casual user who is unable to put that much time and effort into a season which lasts for multiple months at a time but who still wants to be a part of a fantasy sports community because of their enjoyment of the game. Also fantasy users usually have to keep of multiple players that they "own" on their team and keep up to date with how well they are playing and whether or not they need to substitute them for a player that is performing better as well as injuries. If a player gets injured in real life and is unable to play fantasy applications do not automatically substitute this player rather it is a manual operation for the user. Once again this creates an issue for someone who cannot keep up on a consistent basis with statistics such as these because of outside factors.

The purpose of OneVOne is to eliminate these issues by introducing a new fantasy sports system that limits the commitment of a season to one night at a time. Also furthering this goal of simplicity OneVOne has the user select one basketball player each night instead of choosing an entire team and having to keep track of every player. Once both users have selected and locked in their chosen player the players will earn fantasy points based on their real life statistics in their respective games that they are playing. Based on these stats OneVOne will use an internal ranking system that also implements a handicap feature for certain players who are better than others. Once the real life games are over whichever player has more fantasy points wins the matchup.

Implementation

OneVOne uses a Node.JS and Socket.io backend that is supported by front end JavaScript modules. The rest of the front end web application is made and customized using HTML5 and CSS3. The sports data is inputted into the web application using JSON and CSV Files. The following sections describes each modules functionality and contributions to the overall application.

A. Authentication and Access Control
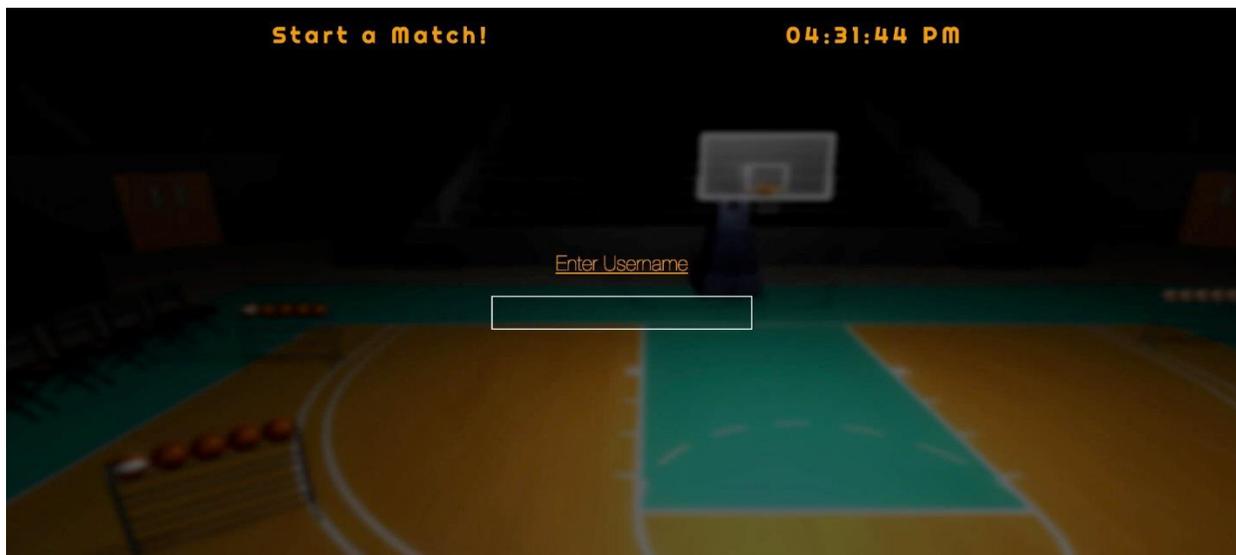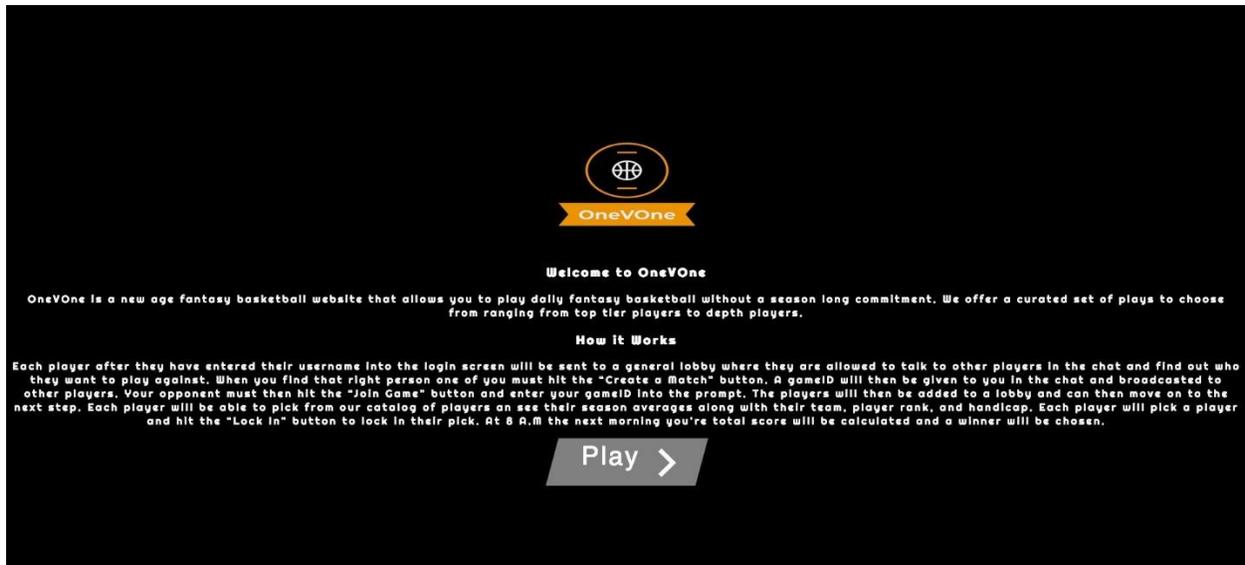
To access OneVOne a Username is required. Currently there are no user restrictions as too what they can enter as this can be a one time use application. Also there is currently no password or security encryptions. Once the username is verified the user will continue to the main module page, only administrators are able to see a complete list of active usernames.

B. Personal Module

This is the Personal Module that the user is brought to after the username has been verified. From this page the user has the option to either select a player, which brings up their real life in-game statistics, giving the user a better understanding of each players abilities. Once the player has selected a player to choose they select lock in, and then play match. If they are already apart of a game and decide not to participate before locking in they have the option to leave the match and return to either selecting a different player or quitting the application all together.

C. Vehicles Module
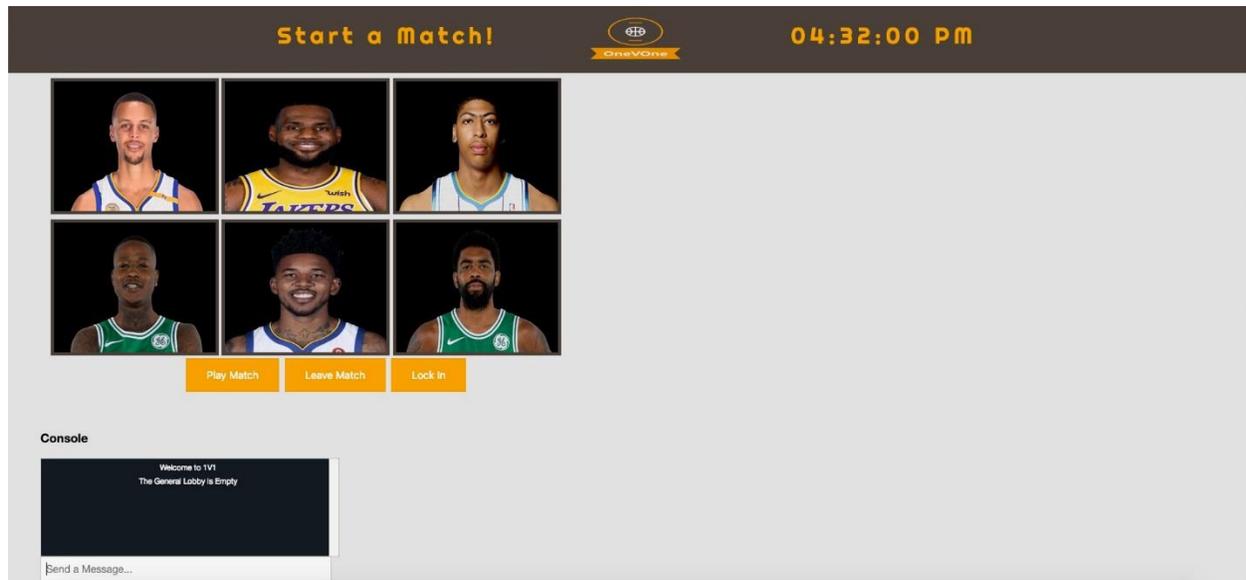
This module is similar to the previous module whoever this is the module the user is brought to after they have selected play match. This module will display the player the user has selected as well as the other player once they have selected their player. Along with other selections this module gives the user the final option to lock in their choice of who they want to one v one someone with. Along with this the module provides a console area that displays the other users in the lobby and the ability to send messages back and forth to communicate before and during the matchup. More than two users can be present in the lobby but you will only match up with one other person.

111. Summary and Future Work

OneVOne is a very innovative perspective on the world of fantasy sports and is a great step in the right direction for addressing the issues that occur with other similar applications. With the main idea of being a minimal commitment but maximum reward process implemented in this form of OneVOne there are still many improvements to be made and additional modules to add. With the help of user feedback, more idea-creating discussions between administrators, and further research on the given topic these additions will be implemented with the goal of continuing to make the fantasy sports experience a more user friendly one that will make it possible for everyone to enjoy no matter their outside life circumstances.

References

"Node.JS" retrieved from: https://www.w3schools.com/nodejs/nodejs_intro.asp

"NBA Players and statistics" retrieved from: https://stats.nba.com/

http://www.espn.com/nba/statistics

"Fantasy Sports Information" retrieved from: http://www.rotosource.com/basketballreviews.html

https://www.cbssports.com/fantasy/basketball/ (how other sites operate but still relevant)

http://forums.rotoworld.com/topic/97556-bill-simmons-how-i-would-fix-fantasy-basketball/ - possible problems with fantasy basketball that helped in developing our application)