SE 464 Project Demonstration – Shots Fired

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November 22, 2016

1 Demo Summary

In this demo, we will demonstrate how our application works as whole. We will show each part of the app and how we attempted to satisfy our two original user scenarios as determined in Deliverable 1. The first user scenario was for a person to be able to play with a group of friends. This would be done by allowing users to create a private match in which they obtain a URL that their friends can use so that everyone is entered in the same match. The second user scenario was a for a person to be able to play a game without friends. Here they would enter a Quick Play mode and be entered in a lobby with random people. The game would start once the maximum number of players have entered the lobby, or at least the minimum number of players have entered the lobby and a time limit has been reached.

With respect to the first user scenario, a user is presented with a splash screen. They then click the "Private Match" button to start a new private game that they can play with friends. The first person to create the private match will be presented with a screen that shows a URL that they can provide to their friends. When someone goes to this URL, they will be entered into the lobby. In this mode, there needs to be 4 players in the lobby in order to start the game. Once there are 4 people in the lobby, the gameplay will commence.

With regards to the second user scenario, the user is presented with the same splash screen. They then click the "Quick Play" button to join the lobby for a game with random users who also wish to play this mode. Once there are at least 2 people in the lobby, a 5 second countdown starts. Each time a person joins the lobby, the countdown is restarted. Once the maximum number of players (4) have joined, or the countdown hits 0 when there are more than the minimum number of players (2), the game will start.

In both game modes, the gameplay is the same. Each person is given a character sprite and is placed on one corner of the map. The character has unlimited ammo and a finite number of lives. That being said, the character can be hit that finite number of times before they are eliminated from the game. Once there is only 1 character remaining, the game is over and all users are presented with a game over screen.

The user who won will see a slightly modified screen, congratulating them for being the winner, whereas everyone else will see a game over screen. In both screens, the user is presented with an option to go to the main menu.

2 Status Report

Our app currently contains most of the functionality we specified in our original proposal. Right now, a user has the option to play a game with friends through the "Private

Match" option and they have the option to play with random people using the "Quick Play" option. This accounts for our requirement of a user being able to join a matched game (through the "Quick Play" option) and for a user being able to play with known people in an isolated environment (through the "Private Match" option).

Our app conforms to the 2D arena style game that we proposed where human players will have their own character and must navigate through a 2D map. In terms of the player movement itself, where each person is on their own computer, a user moves his character using W to move up, S to move down, and A and D to move left and right respectively. A user aims their gun using their mouse pointer and they fire bullets by left clicking on the mouse. The player movement agrees with the movement requirements that we decided in the proposal.

In terms of restrictions to the user, we currently have each character set up such that they have a finite amount of health and every player starts off with this amount of health. Each character also has a weapon with infinite ammo, meaning that the user can just keep shooting without having to worry about anything happening to the gun or bullets. Each of these restrictions were specified in the style of game that we had in the proposal.

Our app is also able to support running multiple instances of the game at once. This satsifies the functional requirement of the application being able to run multiple simultaneous games.

With respect to the non-functional requirements that we specified in our proposal, we had mentioned being able to have good performance, usability, simplicity and compatibility. Our app is compatible with Chrome 52+ as mentioned in the requirement so this is satisfied. It's also very easy to join a game, be it a Quick Play or Private Match and the controls are simple to use by just having the 4 keyboard keys plus the mouse. This satsifies usability and simplicity respectively. In terms of performance, the app runs relatively well. Having more games run simultaneously does hurt this performance however as it puts a strain on the server.

We did experience some difficulties while working on this app. One issue was with respect to client/server synchronization and making sure that client inputs reach the server and the server is able to update all the other clients in a timely manner without major lag. Another issue was with respect to the use of socket connections with SocketIO and the difficulty of obtaining information through their documentation. A last issue was with regards to deployment. It was hard to deploy this app as deployment servers want to run their own commands on the repo instead of the commands that we wish for the server to run. These were some of the difficulties that we encountered while working on our application.