Requirements Document

1. Introduction

* This product will facilitate 2 player battleship, hold accounts passwords, maintains leader boards, allows for ingame chatting, and provides an appealing gui with background music and highly interactive button employment. Moving through multiple pregame windows as you navigate to the game.

2. User Requirements

2.1 Software Interfaces

List all the external systems with which the software product interacts. These are external systems/libraries that you have to interact with.

This progame uses google console to set up a server as well as load a virtual operating system. The client is run through a java compiler such as eclipse and uses various text files as a database for stored information such as leaderboards and passwords.

2.2 User Interfaces

Specify the logical characteristics of each interface between the software product and its users. This is a description of how the system will interact with its users.

Our game interacts with the user through various sequential screens. First the login in screen which requests a username and pass word. Once succesful login is completed the user is brought to a main menu screen which gives the option to proceed to game, review the leaderboard, access the help screen, priempitively engage in game chat, and alter administrative options.

2.3 User Characteristics

Describe those general characteristics of the intended users of the product, including education level, experience, and technical expertise.

This is a computerization of a very basic board game meant for anybody from young kids too adults. It will target school age kids and fans of battleship in general and is meant to be very user friendly for all ages an expirence levels.

2.4 Assumptions and dependencies

Our List each of the factors that affect the requirements stated in the document.

Requierments were influenced by a multitude of factors. Factors that drove the main goals of functionality for our project included the need for an easy to use fun looking battleship game with an online multi player function and the use of accounts so as to keep track of a leader board and have recognition between players. Some limiting factors included programming experience and time constraints.

3. System Requirements

These subsections contain all the software requirements at a level of detail sufficient enough to enable designers to design a system to satisfy those requirements, and tests to test that the system satisfies those requirements.

3.1 Functional Requirements

- Graphics

- a login screen with texts fields for username and password and a ‘login’ button killed on completion

- at the completetion of login screen a option screen 4 buttons start game/leaderboard/chat/ options/ help killed when game is started

- when leaderboard is pressed a screen will come up displaying the top 5 players according to games won

-when chat is pressed a screen with a text field to take in messages and another to display an open converstion between all players on the server

-when help is opened a screen explaing functionality of the game and how to play

- once start game is pressed all but the chat window if opened is killed

- the game will contain buttons to set each ship and will prompt in a message window to pick the first and last coordinates of the ship and specify its length on one of 2 10x10 button grids specified as home grid. Once the ship is verified as being of propper size it will apear on the board

- there will also be a randomize function which will randomly place ships on the board one at a time

- a reset button will allow the user to clear the board of ships

- once the ships have been placed the a finalize button to lock in ships and send ship coordinates to server

-after finalize all set up buttons are killed and in game fire coordinates text field and button appear which will prompt the user in text field to type in firing coordinates and click the fire button

- in addition there will be an ingame chat

- during game play the turns will go back and forth indicated by the disapperance and reaperance of the firing button. Each time a shot is fired it will appear as white or read for a miss or a hit respectively on the firing grid.

- likewise it will light up a button on the other players home ships grid to be white or red appearing behind the super imposed ship

- once one player succesfully sinks all of the other players ships a window will appear on each players computer to indicate game results and the firing apparatus is killed and a main menu button will appear

3.2 Non-Functional Requirements

- the program is secure because if someone was going to attempt to enter our server and change files, they need to be properly approved using a key located on both the user’s computer and the google server. This way, cheating is avoided. When a hit is landed by a user you only receive the words “hit” or “miss” not the enemy’s shiplocations

3.2.1 Software Quality Attributes

List the quality attributes that are important for your system (e.g., reliability, security) and explain why they are important for your system and how they will be measured.

Main quality consideration include ease of use, asthetics, and in game features

* While the first two tend to be opionion based in nature, there are clear efforst made to meet these goals.
* We use a broad range of pictures and gifs in our backgrounds for the various screens and big buttons that are clear to find and centered on the screen so that they are not easily missed
* They are give clear intuitive names to allow for straight forward navigation of the game
* color schemes are tasteful and the game board includes entertaining user interactivity
* a help screen is in place to help futher explain the concept of battleship and how to play and use the features provided.
* The options button allows for some user administration of the game.