

# Warship Project Proposal

Michael Bessey & Markus Hussein  
HCI 573X

Battleship is a fun board game that many can associate to fond memories of afternoons spent with friends and family. The purpose of our project is to recreate Battleship on the web using advanced web technologies. We intend to create a fun interactive experience that brings back people's recollections of time spent with this classic board game as well as provide players with new experiences through a modern re-implementation of Battleship's game-play and aesthetics. With this re-implementation of Battleship we are also re-branding the game with a new title, Warship.



## Target Audience/Users

The audience we wish to target are casual gamers, sentimental board game enthusiasts, and retired navel officers. Also, we intend to launch this game as an installable web app in the Chrome Web Store. As a Chrome web app it would be part of a marketplace and therefore we anticipate that it will have a greater chance to be seen and played by many people.

## Demonstrated Need or Applicability

In creating a web based version of the classic Battleship it will create opportunities for family members to reconnect. Brothers and sisters who use to play Battleship together when they were young but have now become wrapped up in their own lives or parents who used to play Battleship with their children who have grown up and started families of their own, will now be able to re-establish these relationships. A web based Battleship will allow family members to transcend the distance between them.

Additionally, casual games have become a very popular past-time. There is a demand for games that don't require a long-term time commitment or special skills to play. Warship will fulfill that demand and will provide a nice respite from the hectic demands of daily life.

## **Other Related/Comparable Websites**

### Battleships

Can you be the savior and destroy the enemy fleet?

<https://chrome.google.com/webstore/detail/opmjilhagjcljfhognaphkplgnodmha>

### Chrome Battleship

This is a basic Battleship game build for Chrome and Chrome OS. It has 3 levels; Easy (Indian Ocean) Medium (Atlantic Ocean) and Hard (Pacific Ocean)

<https://chrome.google.com/webstore/detail/namnjlcphdhimhidflaomgpmfkjmojan>

## **Anticipated Required Functionality**

### **Features**

#### Player Registration System

Users will be able to register and create a player profile with the site. A player will be able to customize their player profile with an avatar image. Also, the results of each battle the player participates in will be associated with their player profile.

#### Single-player Battles

Players will have the option to compete within a single-player battle against an artificial intelligence. The artificial intelligence will provide a moderate level of challenge.

#### Player Match System

Players who wish to participate in a multi-player game will be able to choose their competitor from a player match page. Each possible competitor listed on the match page will have a score that indicates how suitable the opponent is to compete against. The score will be base on the

win lose ratio of the opponent.

### Multi-player Battles

Players will be able to battle against other live players through interactive real-time synchronized game-play.

### Leader Board

The website will keep track of all battle match statistics. The website will have a Leader Board page which will list the top players who have the greatest success rate. Any players will be able to challenge to a top player listed on leader board to a battle. A top player will have the option to ignore the challenge.

### User Experience

We intend to provide a fun positive immersive user experience through interactive game-play, music, and sound effects. In the battle area the player will be able to place his ships wherever he wants on the board. The player will move each of his ships around the board by dragging the ship with his/her mouse or rotating the ship with a designated key.

## **Future Possibilities**

Perhaps the infrastructure built to support this project could be expanded to support many more online games. We would be able to reuse the player registration system as well as some of the game play features such as the synchronized multi-player JavaScript layer in future games. Also, we can take what we learn about creating installable web apps and deploy future applications we build within the Chrome Web Store.

## **Technical Requirements**

We anticipate a high level of complexity associated with completing this project. The following lists the how we intend to implement the features listed above and what technologies we intend to use.

We will need to make use of JavaScript and Ajax to make the game-play interactive. We would also need to make use of PHP and MySQL to allow for player registration and to track match

results in order to provide a leader board.

We will create an immersive fun atmosphere through compelling imagery and styling with CSS as well as with JavaScript through music and sound effects. We also intend to use web sockets in order to provide real-time feedback between players in a multi-player game.

## Deployment Environment

- Site URL (www.warship.pro)
- Hosting Company: TBD
- Apache 2.2.21
- PHP 5.3.8
- MySQL 5.5.16
- Supported Browsers: Firefox 9+ and Chrome 16+

## Navigation Flowchart

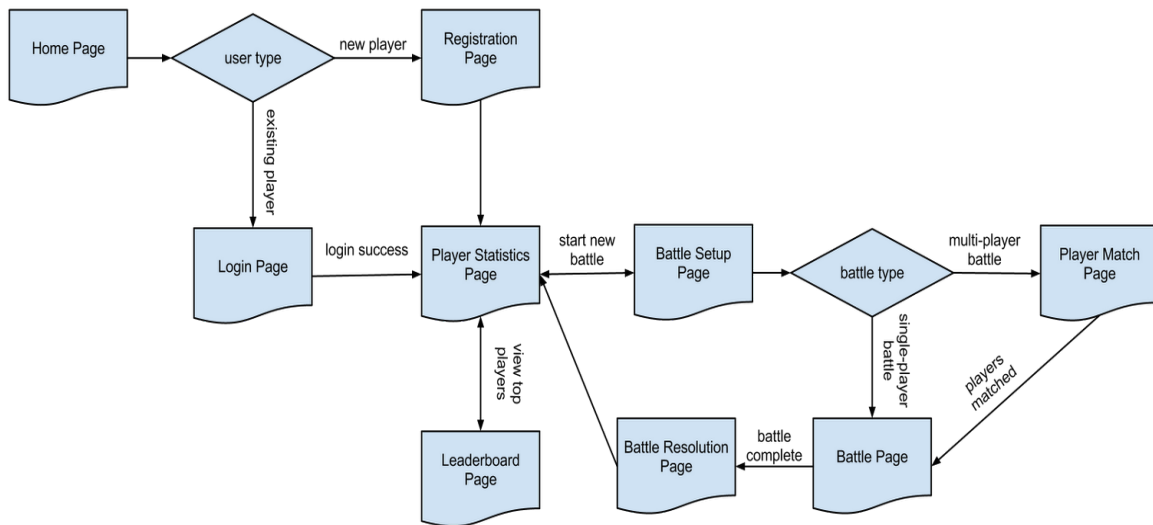
The following flowchart shows the navigation through the Battleship game website. At the main page the user can login (*Login Page*) into the member area (*Player Statistics Page*). If it is a new user he has the possibility to register a new account (Registration Page). The necessary data to create a new account are the mail address, the user-name and a password. After the user submit his data, the system will check the input. If the data are correct and the mail address not registered the user get a conformation mail to confirm the account creation.

In the member area (Player Statistics Page) the user can look at the leader board (*Leaderboard Page*) to see the ranking of other members and his own ranking. To start a new game (*Battle Setup Page*) the member can chose between a single-player match against a computer and a multi-player against another member.

To compete a multi-player match (*Player Match Page*) it is necessary that the combatant accept the match. If the combatant decline the match the user can try it again or select another combatant. If a combatant declines a match three times in row, the challenger is blocked for 10 minutes to challenge the combatant again. If the combatant accepts the match the battle starts and is running till all ships of one player are destroyed.

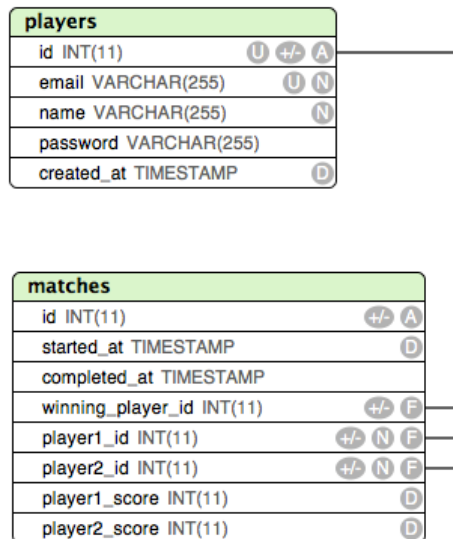
The single-player match (*Battle Page*) against a computer attends as training and the results will be not stored to get a better ranking in the leader board.

After a game is over the player get shown the results of the battle (*Battle resolution Page*).



## Database Schema

The following schema shows the database design.



## Wireframes/Mockups

