



## **Instruction Manual - Team 5**

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### **Introduction**

Welcome to Battletracks. Put your traditional battleship skills to the test, with a boiler spin on it. Choose your path of either single player or multiplayer. Face either our AI or other live opponents. Play the tracks and climb the ranks. This is Battletracks.

### **Getting Started**

Battletracks can be played on any internet enabled device which can access a web browser. You will need a google email in order to be able to create a log in.

U - Under

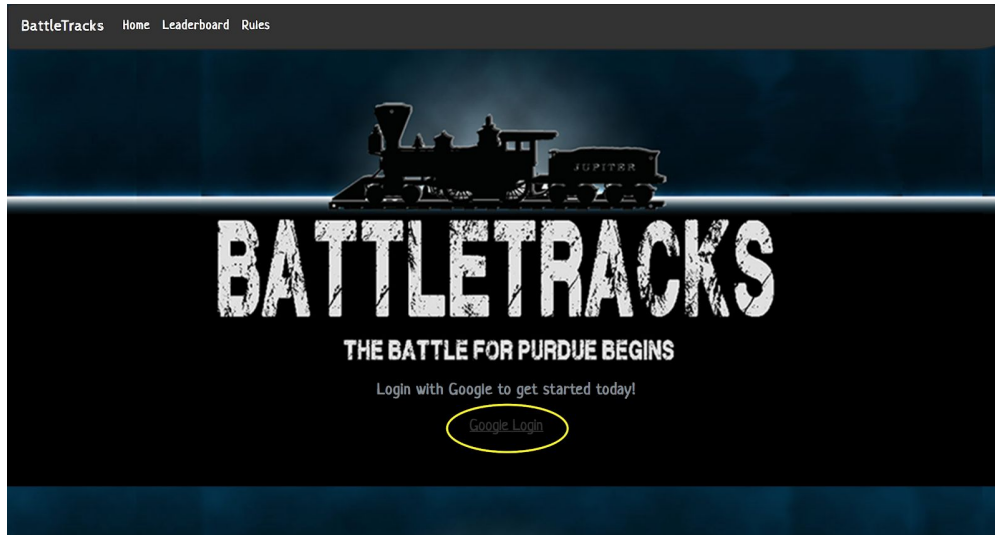
D - Down

L - Left

R - Right

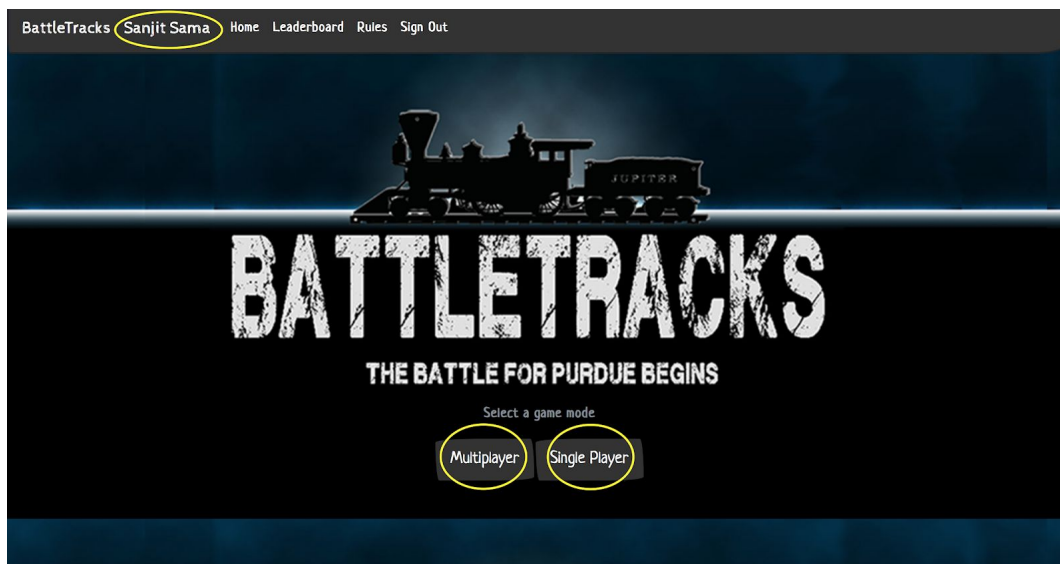
## Instructions - Basics

1. Please go to the following url: boilergames.com:6009
2. You will then be greeted with the following Home Page. Please click the “Sign In” button to get started.



3. After you have successfully logged in, notice that your name will appear on the top left hand corner. Also, notice how that two options have appeared for game mode: “Multiplayer” and “Single Player”.

Before we choose a game board we will familiarize you with the rest of the website.



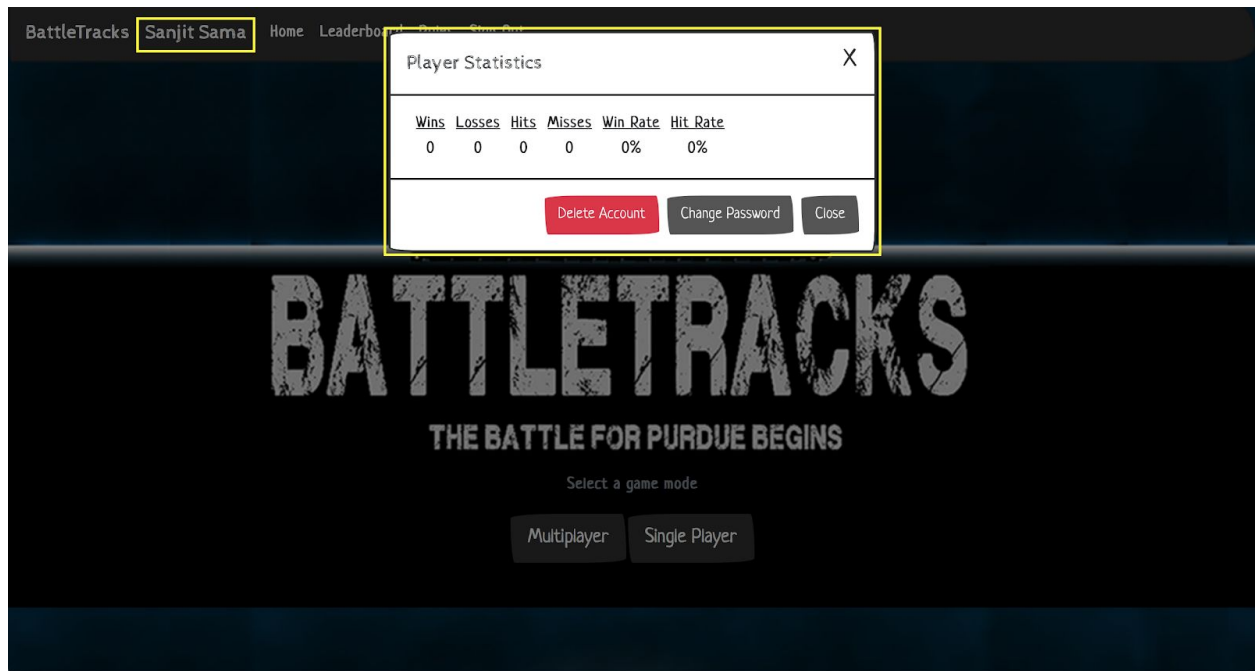
4. **Leaderboards:** The live leaderboard will update based on your **Total Wins - Total Losses**. It will be populated with Top 100.

BattleTracks	Sanjit Sama	Home	Leaderboard	Rules	Sign Out
Top 100 Players					
#	Username	Wins	Losses	Win Rate	
1	David Wood	1	0	100%	
2	Ayush Patel (ayushspark11)	2	2	50%	
3	Eric Vondrak	1	2	33%	

5. **Rules:** The Rules page will greet you with the formal rules to play the game. Please take a few minutes to brief yourself with the instructions.

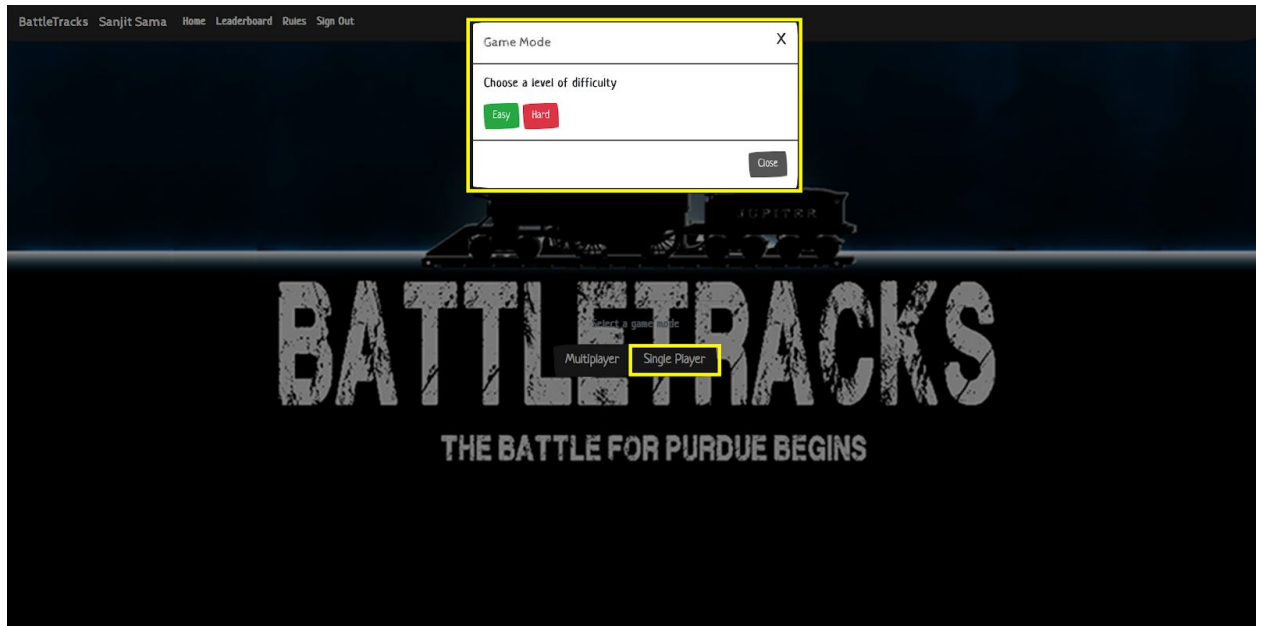
GAME RULES
Game Objective
The object of Battlettracks is to try and destroy all of the other player's trains before they destroy all of your trains. All of the other player's trains are somewhere on his/her board. You try and hit them by entering the coordinates of one of the squares on the board or clicking it. The other player also tries to hit your trains by selecting coordinates. Neither you nor the other player can see the other's board so you must try to guess where they are. The board on the left side is your board, and the board on the right is the opponent's board.
Starting a New Game
Each player places the 5 trains somewhere on their board. The trains can only be placed vertically or horizontally. Diagonal placement is not allowed. No part of a train may hang off the edge of the board. trains may not overlap each other. No trains may be placed on another train.
Once a train is placed, the players may not move the trains.
The 5 trains are: Electric-Train (occupies 5 spaces), Diesel-Engine (4), Coal-Hualer (3), Caboose (3), and Steam-Locomotive (2).
Playing the Game
Player's take turns guessing by selecting coordinates. The opponent or the UI responds with "hit" or "miss" as appropriate. The board will be marked accordingly for both players: explosion for hit, broken tracks for miss.
When all of the squares that one your trains occupies have been hit, the train will be destroyed. The player who destroyed it will be notified that a train has been destroyed.
As soon as all of one player's trains have been destroyed, the game ends.

6. **Player Statistics:** Once you click on your profile name you will notice that a new modal pops up. Here you can that your personal statistics will appear. Here you can also delete your account.

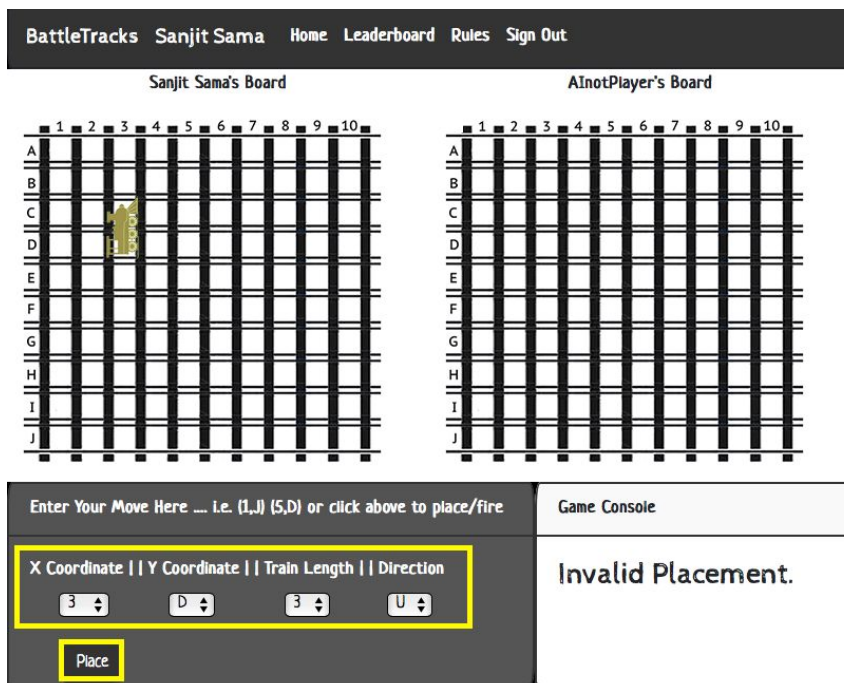


## Instructions - Single Player

1. **Single Player:** Once you click on single player you will be greeted with either “Easy” or “Hard” option for difficulty.

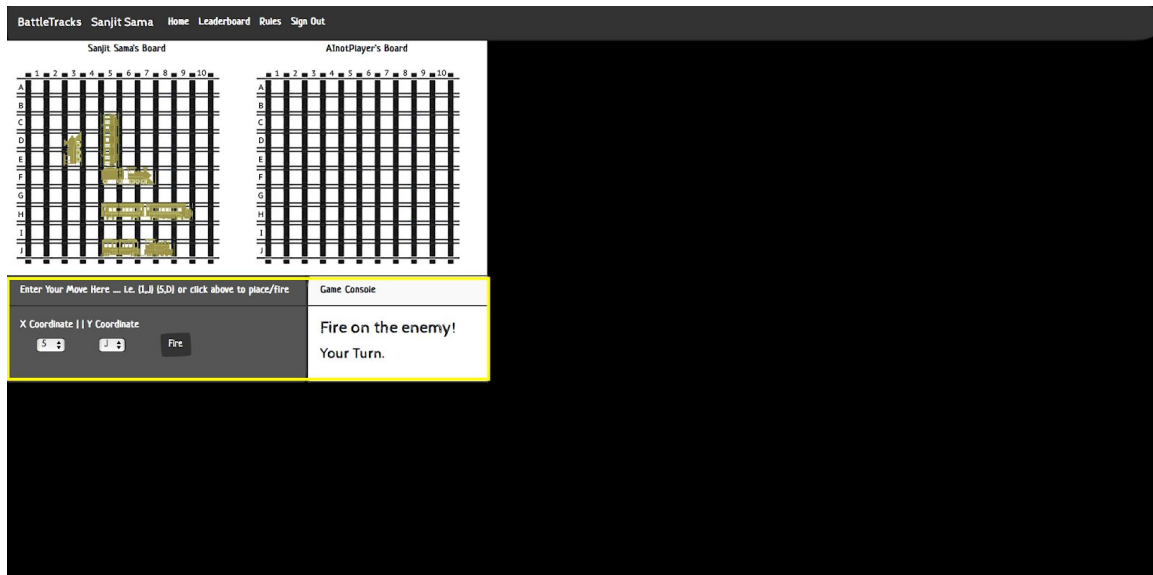


2. You will then be taken to the game page. You must first begin by populating your board with ships. To do so, please choose the appropriate x,y coordinates alongside the size of your ship as well as the orientation. Once you have chosen the desired inputs please click place for the ship to be placed.

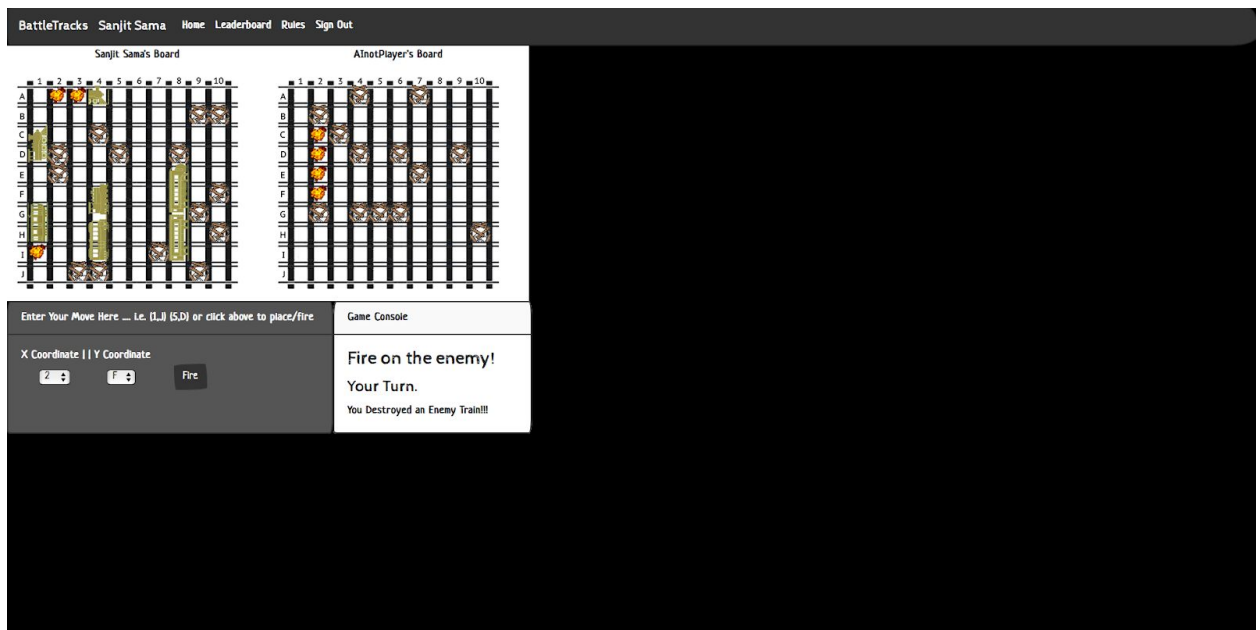


- Once all the ships have been placed you will notice the Game Console to change. The Game Console will indicate when it is your turn. You must click on the opponent's board on the square that you would like to target. Alternatively you may input an X and Y coordinate then click "Fire" so the move might be registered.

Ships You Must Place: 2,3,3,3,4,5

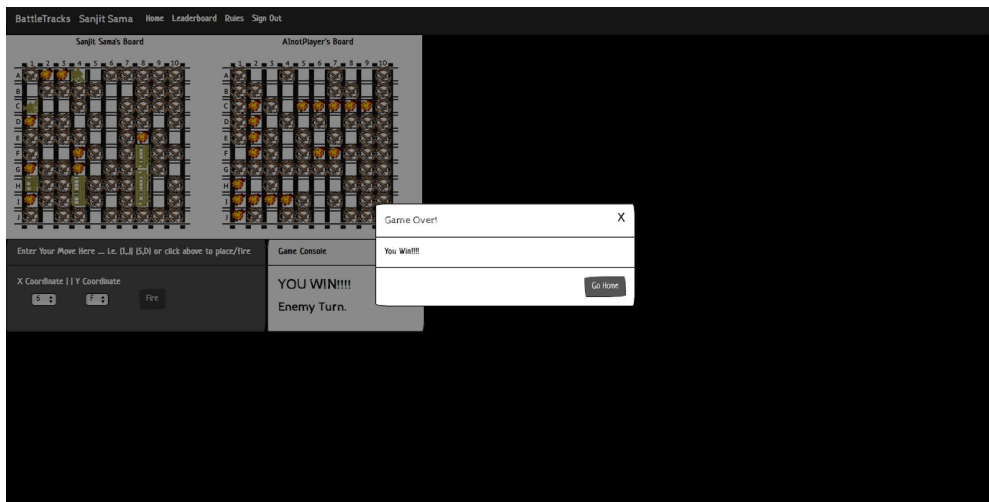


- Notice that when an enemy ship is hit you will see a small image of a blast which indicates that your move was a successful hit. Otherwise, the other symbol, resembling a broken set of train tracks, represents a "miss" on the game board.



5.

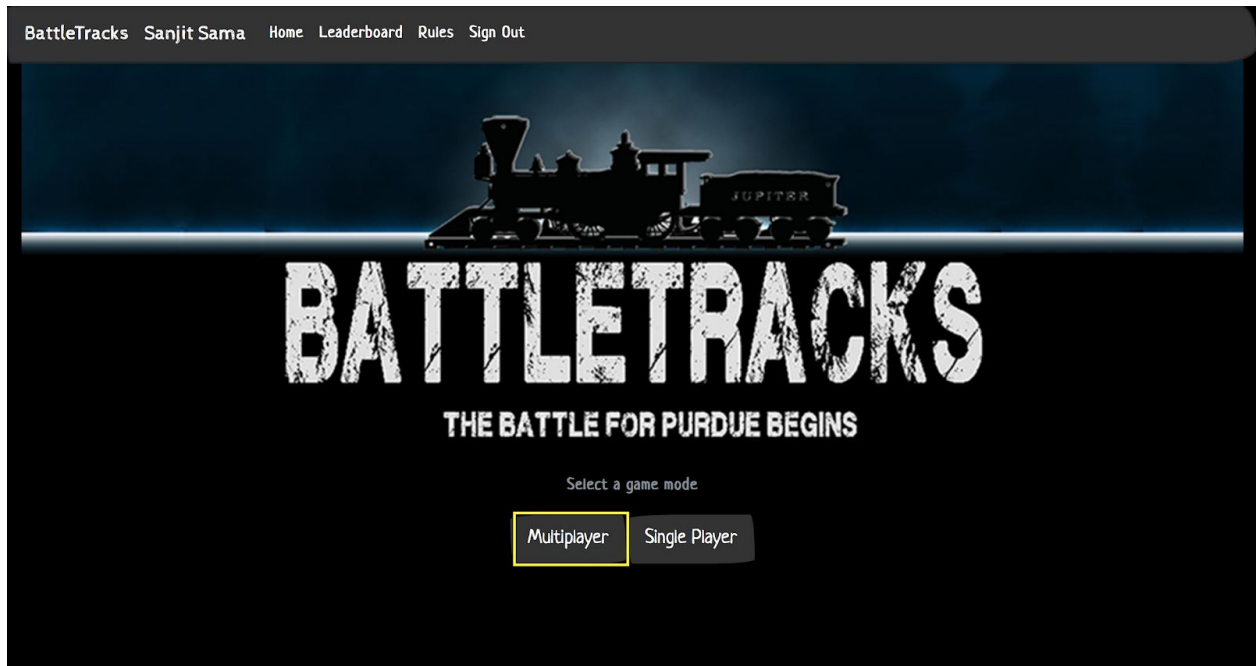
Finally, if you successfully win or lose the game, you will be greeted with a “you win” or “you lose” modal. This will also update you personal statistics. This modal should also appear in the event that your opponent disconnected in the middle of your game. If both players have already joined the match, then the player who leaves will be awarded a loss, and the remaining player will be declared the winner. This will also affect the stats of the players involved. You can view the changed statistics by clicking on your name once you leave the game page.



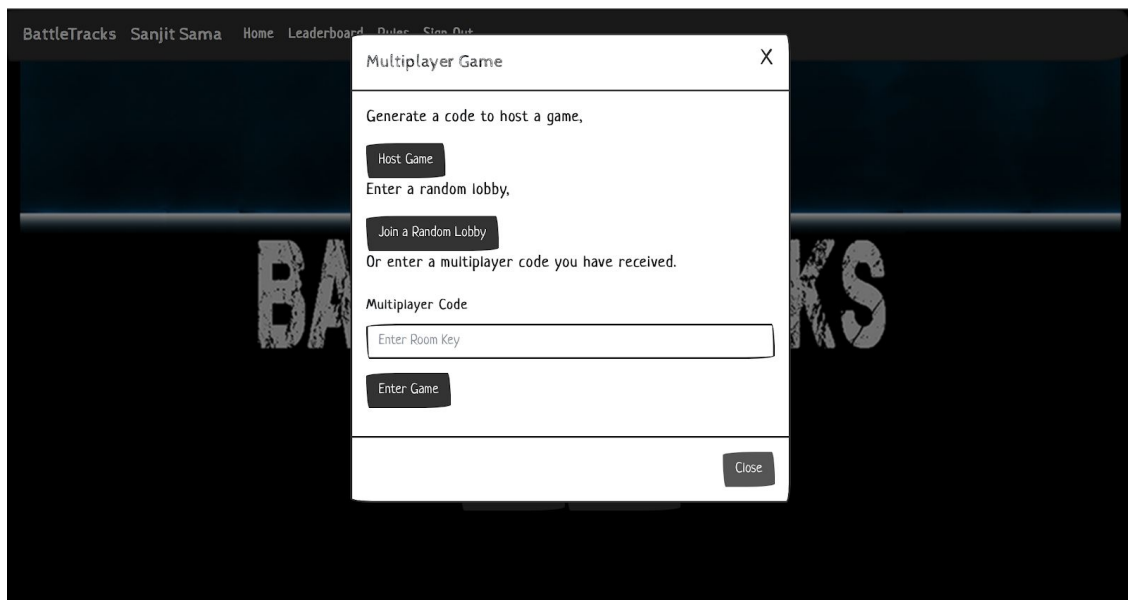
6.

## Instructions - Multiplayer

1. If you would like to play Multiplayer, please select the multiplayer button on the homepage when you first arrive at the website.



2. You will be greeted with a modal which allows you to either join or host a game. If you are joining a game ask your opponent for the Room Key. On the other hand you can host a game which will be furthered explain in the next steps. You may also join a random lobby which will allow you to play other players who have chosen this lobby.



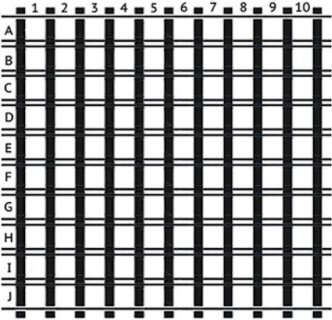


3. Below is the multiplayer game mode. The Room Key is highlighted below.

[BattleTracks](#) [Sanjit Sama](#) [Home](#) [Leaderboard](#) [Rules](#) [Sign Out](#)

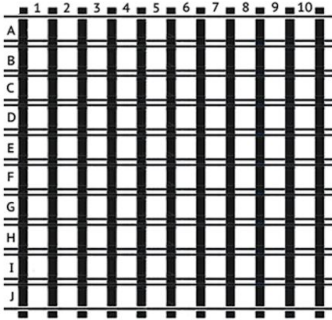
Sanjit Sama's Board

Room Key: 0



Eric Vondrak's Board

Send an opponent this code to start!



Enter Your Move Here .... I.e. (1,I) (5,D) or click above to place/fire

Game Console

X Coordinate | Y Coordinate | Train Length | Direction

1

A

2

U

Place

Place Your Ships.



## Seeded-Defects Log - Team 5

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### Seeded-Defects Log

Defect No.	Defect	Output Before Seeding	Output After Seeding	Suggested Correction	Severity
1	Delete User button does not delete the user.	Leaderboard will no longer display user, and the stats will be all zeros when the deleted user signs in again.	Leaderboard will still display user, and the stats will not have changed if the deleted user signs in again.	Update function in gameFunctions to properly delete user from database.	3
2	Trying to join a game that was previously a singleplayer game will allow the new player to join and play with the abandoned AI.	Joining via a room key that previously was the key to a singleplayer game will cause the server to return an invalid room key error because the game no longer exists.	Joining via a room key that previously was the key to a singleplayer game will cause the user to join that game.	Delete the game whenever the player leaves a singleplayer game.	2
3	Ship two's image is placed incorrectly for the down direction	The image is placed correctly where the image is placed vertically downward from the selected starting point	The image is placed vertically upward from the selected starting point	Fix how the image placement handles down for the two length train	3

4	Turn notification does not update when someone fires.	When you fire, turn notification says "Waiting for enemy to fire", when enemy fires, turn notification says "Your turn".	Turn notification always says "Your turn".	Update the sockets to detect each player's turn so the text properly updates.	3
5	Attempting to host a game creates a hard AI game instead.	Clicking host game will send you into an empty lobby to await another player.	Clicking host game will send you to a lobby with a hard AI.	Update the link the front end sends to the server to '/host'.	2
6	Train five's image is placed incorrectly for the left direction.	The image is placed correctly where the image is placed to the left of the selected starting location.	The image is placed to the right of the selected starting location.	Fix how image placement handles left for the five length train	3
7	Player is allowed to attack before enemy is done placing ships but only by using the fire button	Player cannot fire on the opponent's board while either of the players are still placing. Both the fire button and the clickable board are disabled.	Player can fire on the opponent's board before the enemy is done with placing by using the fire button but not the clickable board.	Use sockets to detect when both players are done with placing, then enable firing.	2
8	Incorrect room keys will cause the server to crash.	Invalid room keys will cause an error message to appear and they will have to input a key again.	Invalid room keys cause an undefined game to be checked, crashing the server.	Check for invalid room keys before attempting to use the data, and send an error if it is invalid.	1
9	Leaderboard displays top 100 players in the incorrect order.	Leaderboard displays top 100 players in order of best to worst.	Leaderboard displays top 100 players in order of worst to best.	Check the SQL query that gets the users for the leaderboard, and order the users descending instead of ascending.	3
10	User can	User receives an	User can fire on	Receive the error	2

	attack the same position more than once.	error message and can fire again if they attempt to fire on a spot they've fired on before.	the same spot they've fired on before, and they waste their turn to fire.	message from the server properly, and notify the user of their mistake.	
11	Game winning modal does not redirect to the homepage.	Clicking the go home button on the game win modal redirects to the homepage.	The go home button redirects to the leaderboards page.	Change the redirection to the homepage instead of leaderboards.	3
12	If the player attempts to attack before their enemy takes their turn, their attack is not prevented when using the attack button.	Player cannot fire if it is not their turn.	Player can fire as much as they like, even if it is not their turn, but only using the fire button. Board clicking is still restricted.	Disable firing after a player fires, and activate the ability to fire after the enemy takes their turn to fire.	2
13	The player statistics close button does not close.	The close button for stats closes the modal.	The close button for stats does nothing.	Edit the modal data dismiss.	3
14	Reloading the page causes the player to disconnect and forfeit the game.	Attempting to leave the game, either through refreshing or exiting, will give a warning to the user.	Leaving the game in any way will cause the player to forfeit, giving them a loss without warning.	Use onbeforeunload to detect when the player is about to disconnect, and give them a warning.	2
15	Sign out button deletes the user from the database instead of signing them out.	Sign out removes the user's data from the cookie, preventing them from playing a game.	Sign out will remove the user from the database, removing them from the leaderboard and resetting their	Redirect button to link to 'logout' and not 'delete'. Also remove the user's data from the cookie.	2

			stats.		
16	Player's hit rate in the statistics modal does not display the correct percentage.	If a player hits are 68 and misses are 52, then the hit rate is 57% . (hits)/(hits+misses)	If a player hits are 68 and misses are 52, then the hit rate is 43% . (misses)/(hits+misses)	Check the mathematical statement that calculates the user's statistics.	3
17	Attempting to go directly to a game without logging in first will allow them to join a game as "".	Going directly to a game without logging in first will redirect them to the homepage with a warning.	Going directly to a game without logging in first will allow the player to play a game without being recorded in the database.	Check if the cookie contains a player name, and if it doesn't, redirect the page to the homepage.	2
18	Clicking on easy for a singleplayer game loads a hard game instead of an easy game.	Clicking easy will load an AI with an easy difficulty.	Clicking easy loads an AI with a hard difficulty instead of an easy difficulty.	Change the easy button's link to set eOrH=easy instead of eOrH=hard.	3
19	Clicking on the Change Password button takes the user to the incorrect webpage	Click on the button takes the user to <a href="https://myaccount.google.com/signinoptions/password">https://myaccount.google.com/signinoptions/password</a>	Click on the button takes the user to <a href="https://www.google.com">https://www.google.com</a>	Change the href under the Change Password button	3
20	Clicking the Battletracks button in the nav bar does not take the user to the correct location	Clicking the Battletracks button takes the user to the home page	Clicking the Battletracks button takes the user to the rules page	Change the href under the Battletracks button	3
21	Resizing the window on the home page once a	Resizing the window on the homepage will hide the	Resizing the window on the homepage will cause the	Change the CSS styling for the buttons on the homepage so	3

	user is logged in will cause the multiplayer and single player buttons to overlay the Battletracks logo	multiplayer and single player buttons if the window is small enough	multiplayer and single player buttons to overlay the Battletracks background image	that they are always at a fixed distance from the top of the webpage	
22	Wins and losses are awarded incorrectly on a player disconnecting mid-game	When a player abandons a match, that player is awarded a loss and the remaining player is awarded a win	Leaving player is awarded a win and the remaining player is awarded a loss	Check which player is leaving and assign that player a loss. Assign the other player a win	2
23	Selecting a place to hit on the enemy board does not display a hit in the selected location	When a player hits on a spot with coordinates (3,7), then a hit is displayed at (3,7)	When a player hits on a spot with coordinates (3,7), then a hit is displayed at (7,3)	Switch the x and y when placing a hit.	2
24	Player board displays opponent's name and opponent's board displays your name	Player board displays your name and opponent board's shows their name	Opponent's name on your board and your name on the opponent's board	Swap around the the html code	3
25	Disconnecting from a game before anyone joins counts as a loss	Disconnecting from a game before anyone joins does not count as a loss	Disconnecting from a game before anyone joins counts as a loss	Create a boolean if nobody else joins a game not to increase the loss count	3