

COMP-361 Project
Battleships – User Interface Sketch

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Descriptions:

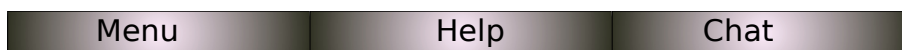
1.1: Application:

Our implementation of Battleships is a web application. The dimensions of the application are 900px by 600px. At all times, there is a navigation bar of dimensions 900px by 35px on the top of the page. The remaining 900px by 565px constitute the game frame.



1.2: Navigation Bar:

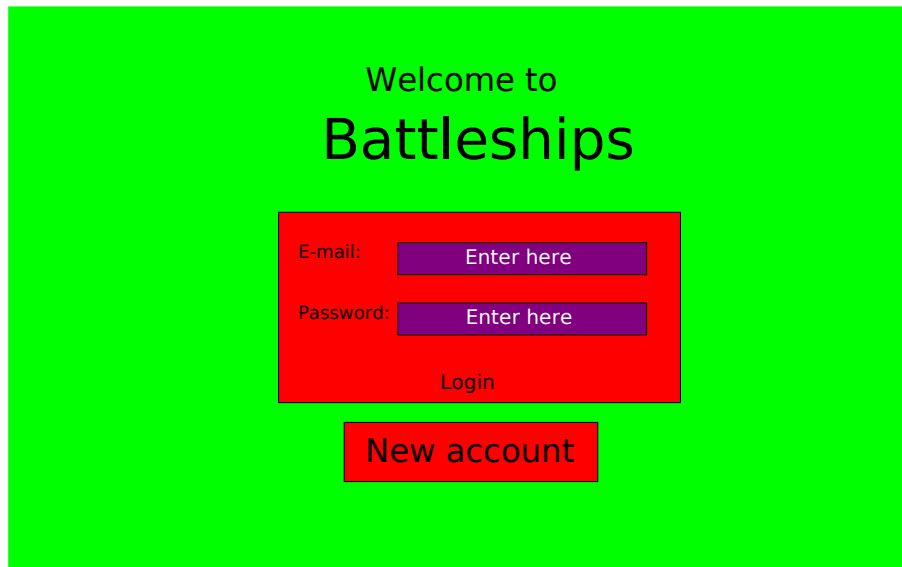
The navigation bar allows the user to, at any time, access the options menu to customize the game, obtain help by reading a short tutorial about the game and access an in-game chat system which allows him to communicate and/or send messages to other players which may or may not be online at the time. Anything which is not in the navigation bar is part of the game frame.



1.3: Login:

Upon loading the application, you are introduced to a simple page consisting of e-mail/password fields which allow you to login with a previously created account. Furthermore, there is a button that allows you to create a new account.

An account includes a username, a password and an e-mail address. The e-mail address is used as the unique identifier and, as such, you only need the e-mail/password combo in order to log in. This also means that multiple players/accounts can have the same username.



The image shows a login page for a game called "Battleships". The page has a light blue background. At the top, it says "Welcome to Battleships" in a large, bold, black font. Below this, there is a white rectangular box with a black border. Inside this box, there are two input fields: "E-mail:" and "Password:". Each field has a blue button with the text "Enter here" next to it. Below the input fields, there is a blue button with the text "Login". Below the white box, there is a blue button with the text "New account".

1.4: Menu:

Upon logging in, you see both your game statistics and your games that are currently in progress. At any given moment, each player is limited to having a maximum of 4 games open. If a user has space, there will also be the option to start a new game. In order to close a certain game, the user must surrender.

It is important to note that games in Battleships do not have to be saved manually. Like various online Chess applications, a game is asynchronous in the sense that it persists on the server-side even though players may not be connected to it.

As such, upon playing a move, the state of your game is automatically saved on the server. This allows two opponents to play even when both are not logged on. Time limits can be set on turns. For example, an opponent can be given up to 48h to respond before they automatically forfeit the game.

Clicking on a previously created game will naturally bring you to that game and clicking “New Game” will bring you to the Lobby.

Games:

game in progress with: userx X
number of turns: x
units lost: x units destroyed: x
goto game

game in progress with: userx X
number of turns: x
units lost: x units destroyed: x
goto game

game in progress with: userx X
number of turns: x
units lost: x units destroyed: x
goto game

open game slot

Welcome <Username>
New Game

100 ships lost
20 losses to mines
20 losses to hcannons
60 losses to cannons
20 instances of repair

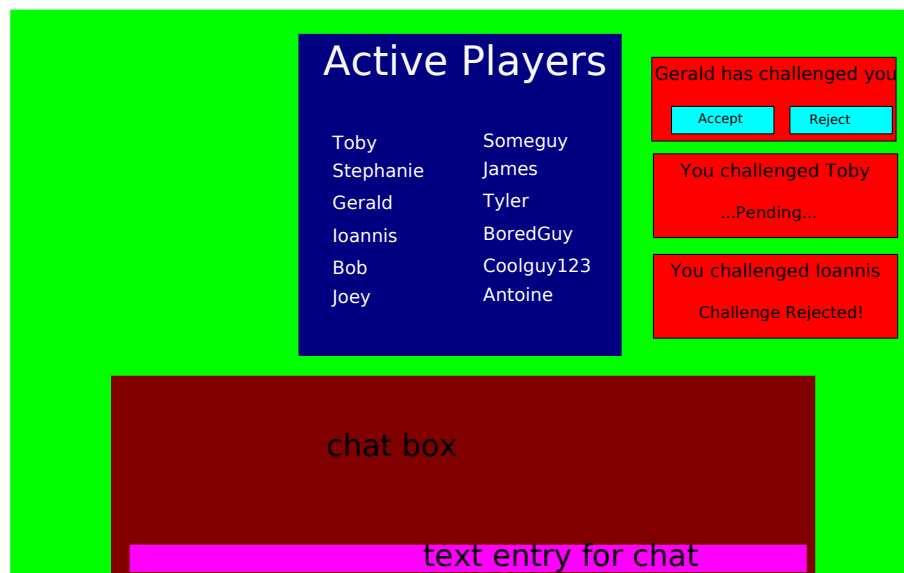
200 ships destroyed
1000 cannons fired
1000 hcannons fired
1000 torpedos fired
1000 mines dropped
1000 mines taken

20 games won
10 games lost
0 games tied

1.5: Lobby:

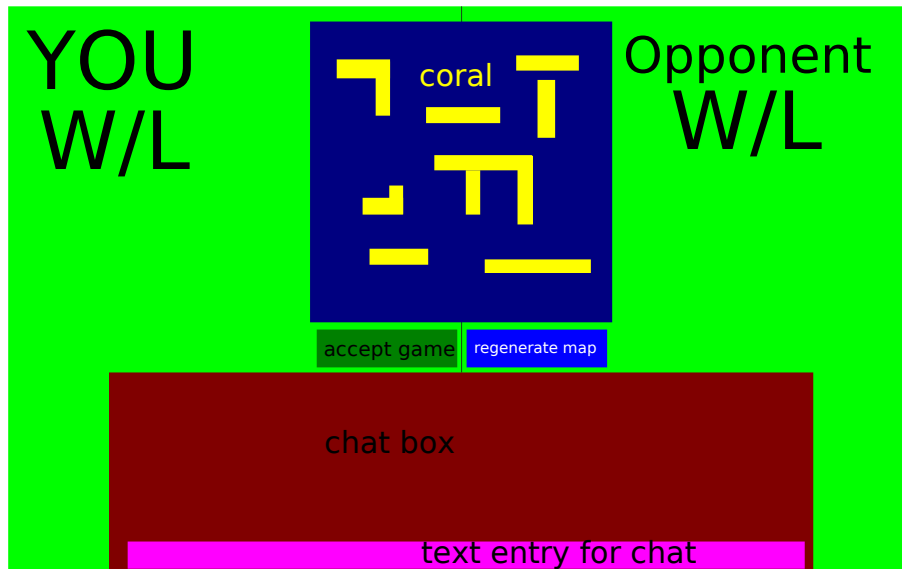
The lobby is composed of a “lobby chat” in which all players currently in the lobby can communicate via text messages. The list of players that are in the Lobby are listed. In order to start a game, you must challenge another player by double-clicking on their name.

On your screen, this will create a window which will indicate that your challenge is pending. Also, this will create a window on the opponent's screen in which he may choose to accept or reject your challenge. Naturally, in the case that he accepts, you will both enter the newly created game. Otherwise, both windows disappear.



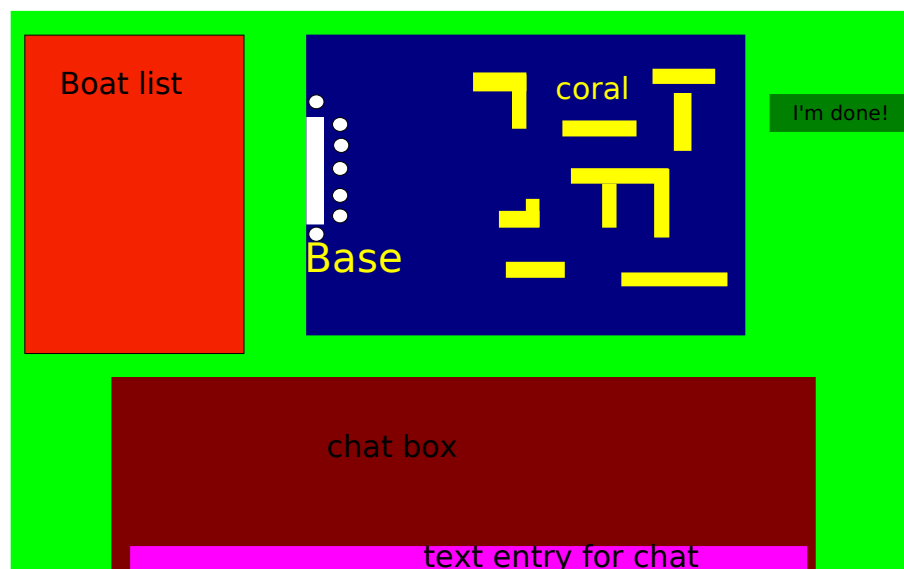
1.6: Map configuration:

The map configuration stage allows both players to agree on a coral reef configuration. At any point, a player may regenerate the map and obtain a new configuration. If both players agree on the current map, they progress to the next stage. In order to agree on a map, they may also use the chat box that is provided for them.



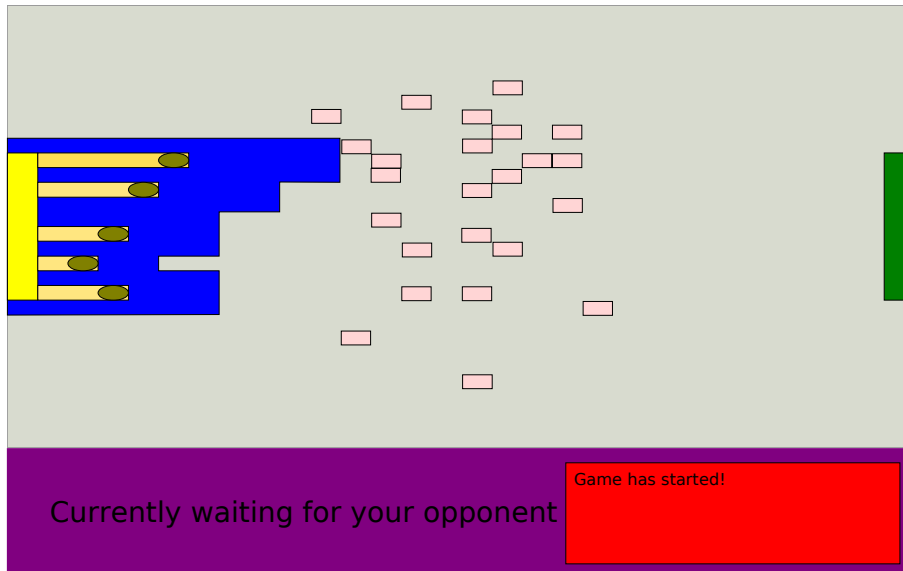
1.7: Boat configuration:

In this stage, a player will have to select the starting position of his boats. Available boats are provided in a list and it is possible to drag a boat from the list to a valid dock position. A valid dock position is defined as any square adjacent to the base, as long as the boat is facing the enemy base. Once both players are ready, the game begins!

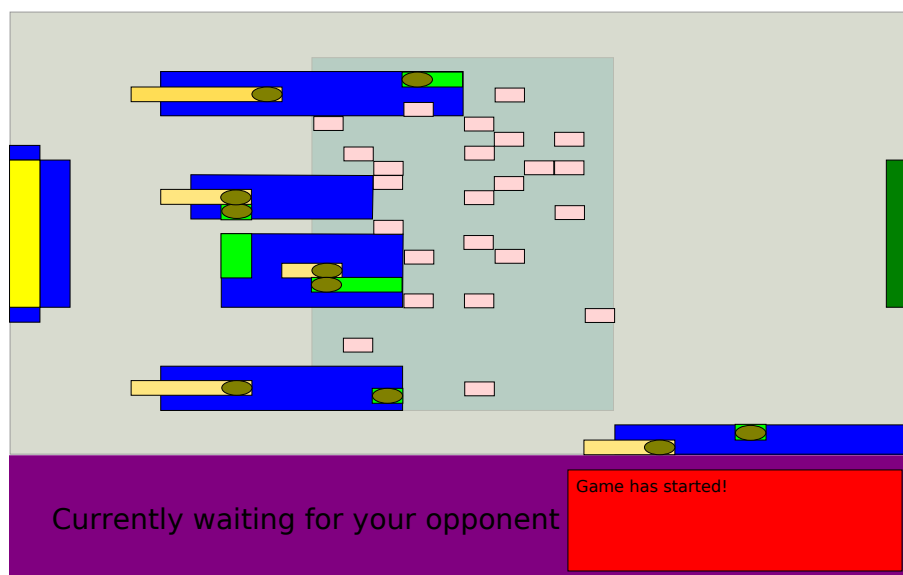


1.8: Playing the game:

The game begins with your boats docked. At any point in the game, you are able to see where the coral reef and the opponent's base are, as well as your own units. Furthermore, each one of your units has a radar which grants vision near the unit. The blue region is the aggregated vision of all your radars. When no unit is selected, the ribbon shows the game log which notifies you when you hit a unit, get hit, etc.



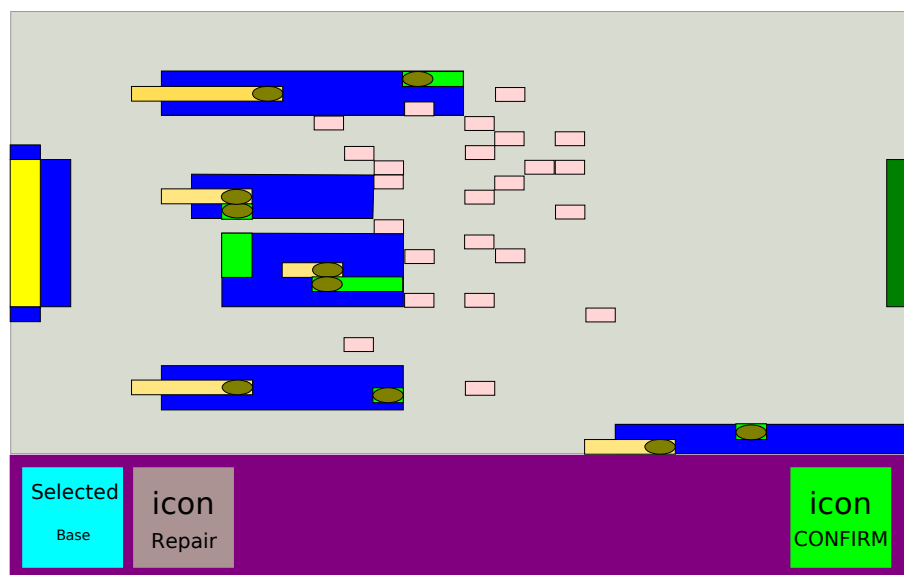
As your ships move around, you are able to see various disjoint regions of the ocean. Furthermore, enemy ships that fall within the range of your vision will be (potentially) partially visible, allowing you to see only the parts of those ships which fall in your range. It is possible for you to be able to see only the tip of an enemy ship and thus being unable to identify it properly.



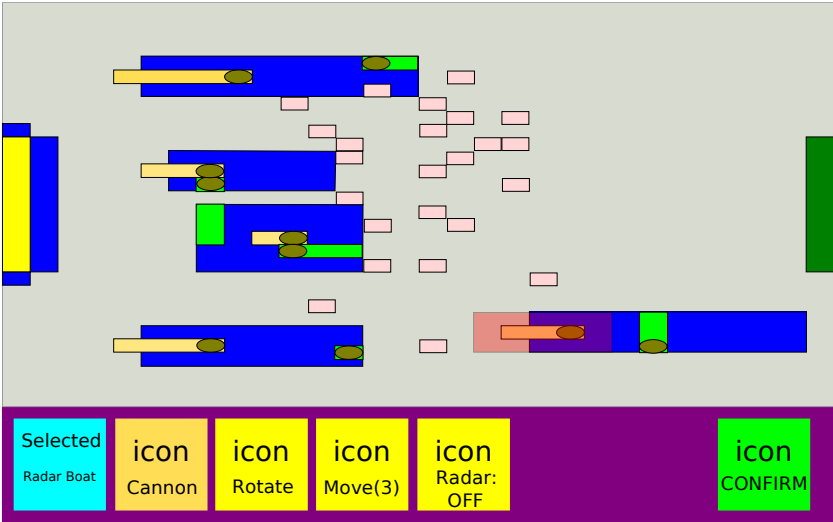
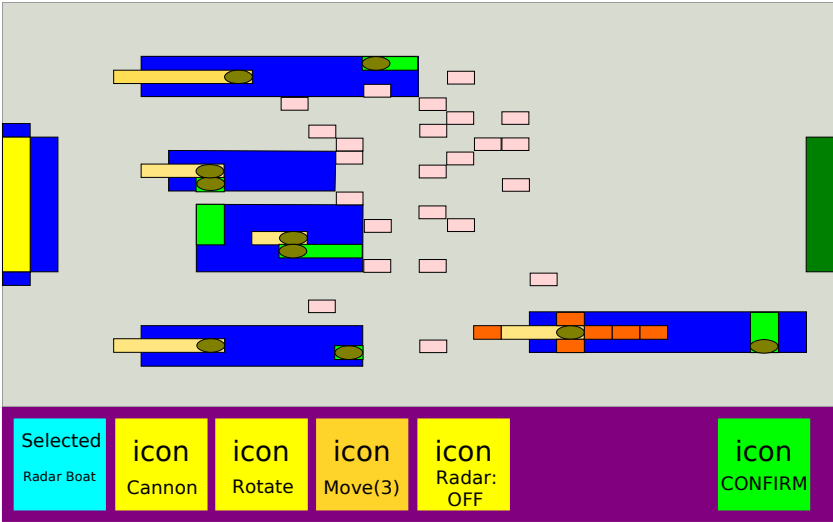
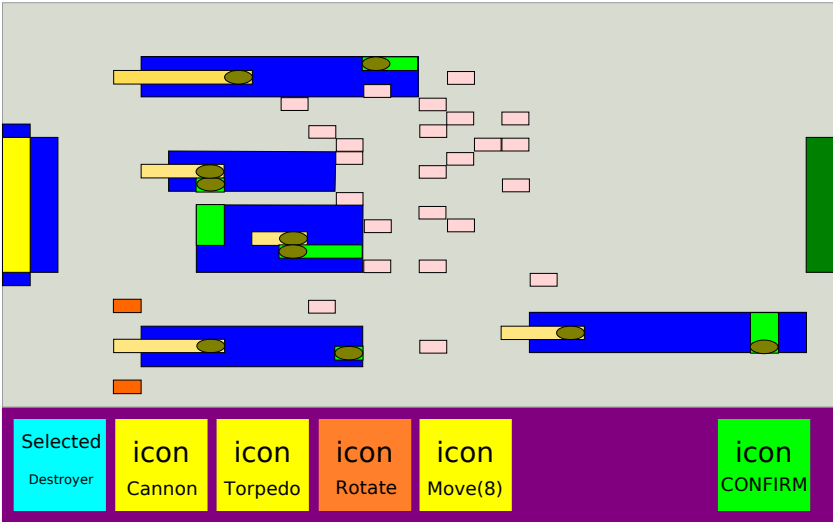
In order to perform any action, you must use the action ribbon. Upon selecting any unit, you are able to access that unit's action ribbon which contains all its abilities. After selecting the action you wish to play, you must confirm your action using the confirm action button.



You must select some unit to perform an action. If you select your base, your only ability is to repair a boat that is currently docked. In order to do this, you must select the “Repair” ability and then click on the boat you wish to repair. Of course, this ability is greyed out if no boat is currently docked and you are therefore unable to use this ability.

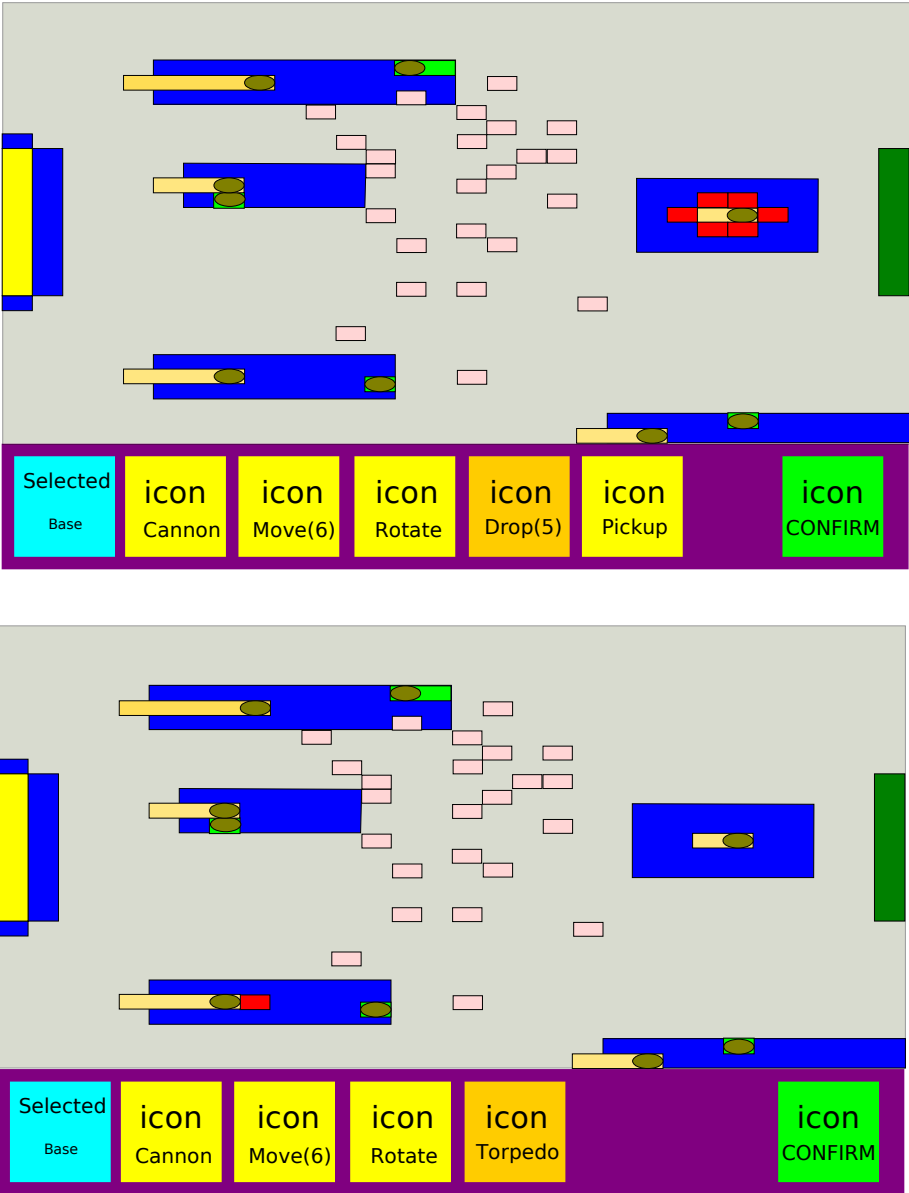


If a boat is selected, all its abilities will appear in the action ribbon. This usually at least includes “Move”, “Rotate” and “Cannon”. Selecting an ability, before confirming it, will give visual hints to the player. For weapons, the attack range for that specific boat is shown as a red region. For “Move” and “Rotate”, respectively, areas that you may move/rotate to are highlighted in orange.

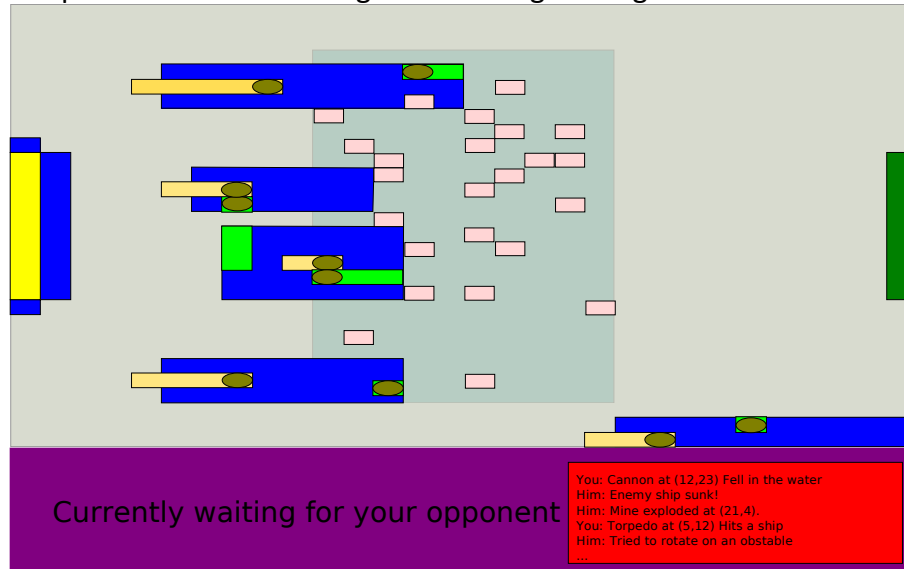


Furthermore, some ships are equipped with torpedoes or mines. Again, areas where you may use these abilities will be highlighted with a specific colour, red in this case. A torpedo may only be placed in front of the ship while mines can be picked/dropped from any adjacent square.

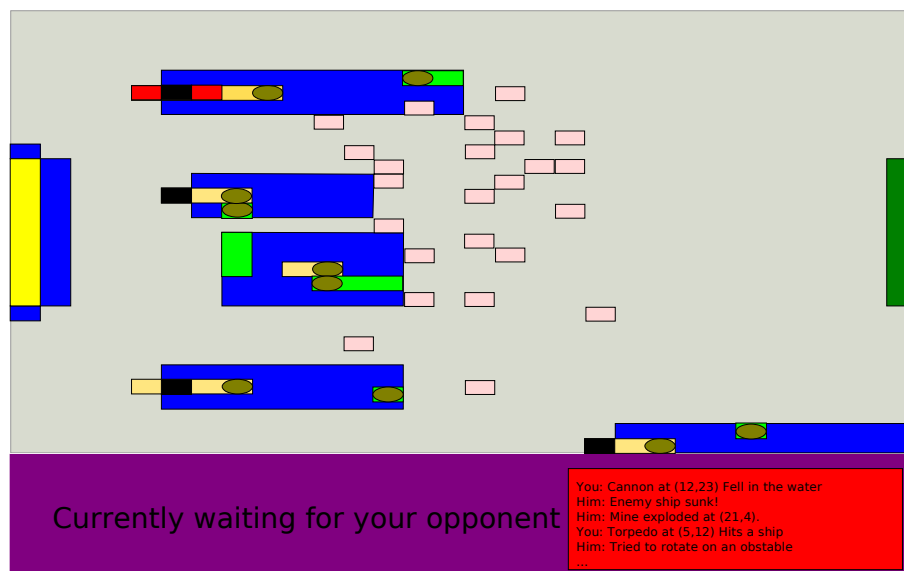
While not shown here, the mine layer is the only unit that can detect mines.



As the game progresses, you may receive notifications such as “Base destroyed”, “Mine exploded”, “Shot fell in the water”, etc. The message log is located in the ribbon and is visible when no unit is selected. It is possible to scroll through the entire game log.



When a ship square gets hit, it changes colour. There are three states a ship square can be in: Intact, damaged, destroyed. The damaged state represents a heavy-armoured ship that has been hit by a non-heavy shot. Other normal-armoured ships transition directly from intact to destroyed. The state of a ship square changes the colour of a boat square. In this example, black squares are destroyed and red squares are merely damaged.



Finally, when a player wins by destroying all the ships of his opponent (or having his opponent surrender), a window appears on the screen which notifies you of your victory (or defeat). At this point, you only possible action is to go back to your menu.

