

A black and white photograph of a battleship at sea, viewed from a distance. The ship is dark, with its complex superstructure and masts visible against a bright, hazy sky. The water is dark and shows some whitecaps. The title 'Project: Battleship' is overlaid in large, bold, white sans-serif font across the middle of the image.

# Project: Battleship

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# What is Battleship?

- A classic two-player game.
- Each player sets up their five ships on a screen the other can't see, and then they try to sink each other's ships; whoever sinks them all first wins.



# Data Structures

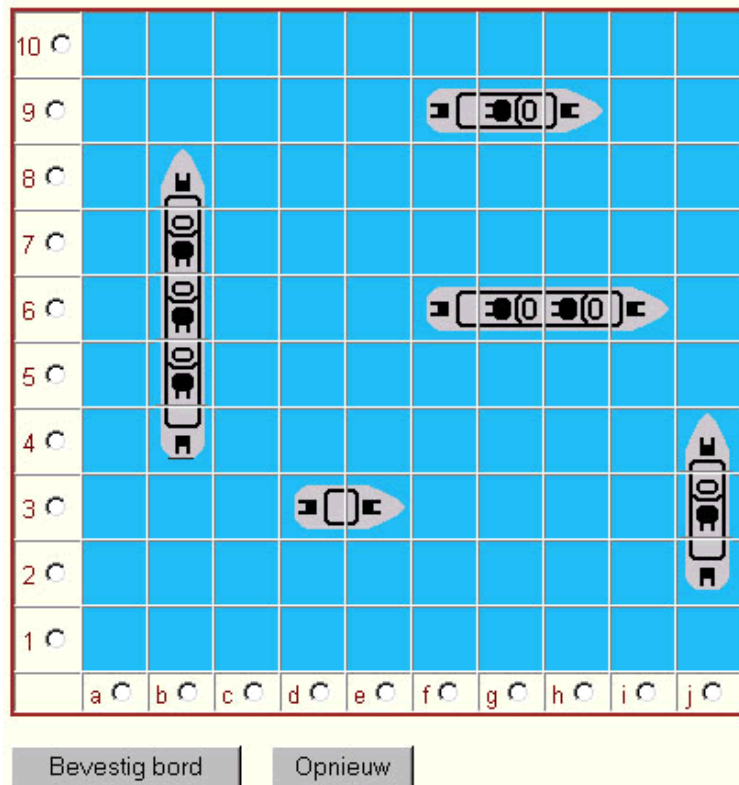
- LinkedList - list of top 5 scores, percentage of games won, average score. Note: score by number of shots required to win.
- Stack - undo purposes; will only remember the last 3 moves. May also add another stack for redo purposes.



# Stages of Creation

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- Boat size: 1x1, Grid size: 5x5
- Boat size increases, Grid size: 5x5
- Boat size varies, Grid size: 10x10



# User Interface

# TITLE

## Player

Hex: # 0080FF  
Red: 0  
Green: 128  
Blue: 255

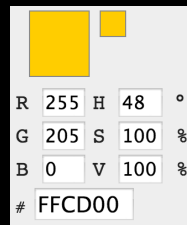


## Instructions

- 1)...
- 2)...
- 3)...

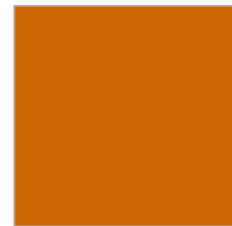
## Banner

Hex: # 330066  
Red: 51  
Green: 0  
Blue: 102



## Computer

Hex: # CC6600  
Red: 204  
Green: 102  
Blue: 0



## Sea (with white grid outline)

Hex: # 003366  
Red: 0  
Green: 51  
Blue: 102



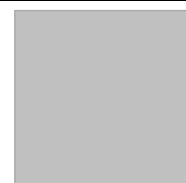
## Hit

Hex: # CC0000  
Red: 204  
Green: 0  
Blue: 0



## Miss

Hex: # C0C0C0  
Red: 192  
Green: 192  
Blue: 192

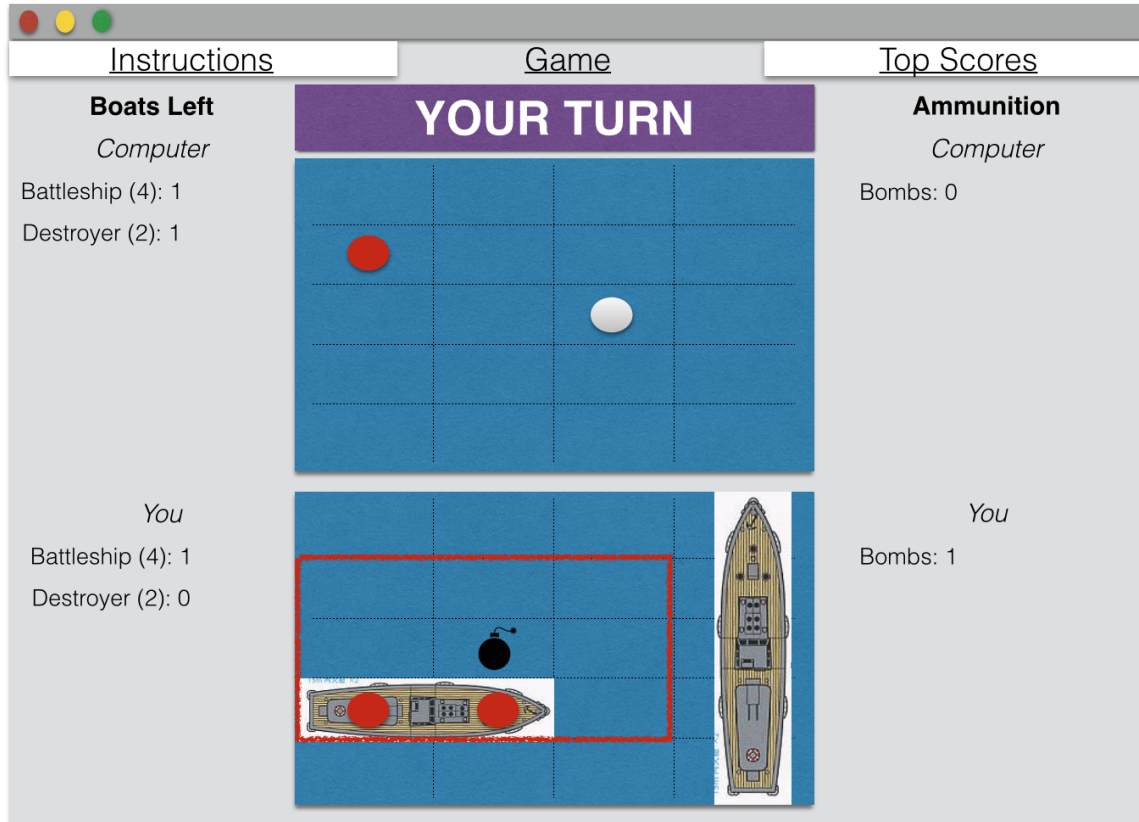


# UI: GamePanel.java

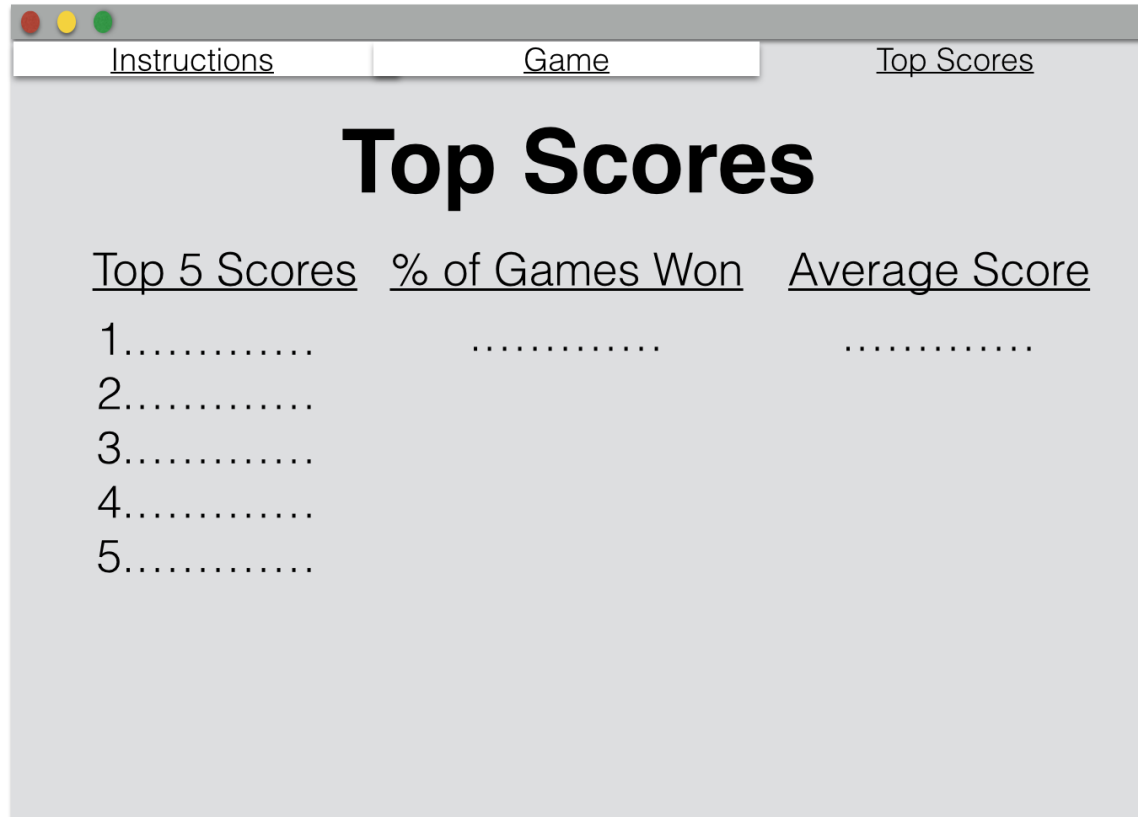




# UI: WelcomePanel.java



# UI: StatsPanel.java



Instructions Game Top Scores

## Top Scores

<u>Top 5 Scores</u>	<u>% of Games Won</u>	<u>Average Score</u>
1.....	.....	.....
2.....		
3.....		
4.....		
5.....		

# Interesting and difficult parts

- Clickable cells to select where the start and end coordinates of the boat are (need to coordinate with underlying 2D array)
- Bombs (3x3 radius)
- Undo (and potential redo)
- Layering of cell and boat
- Computer shooting behavior

