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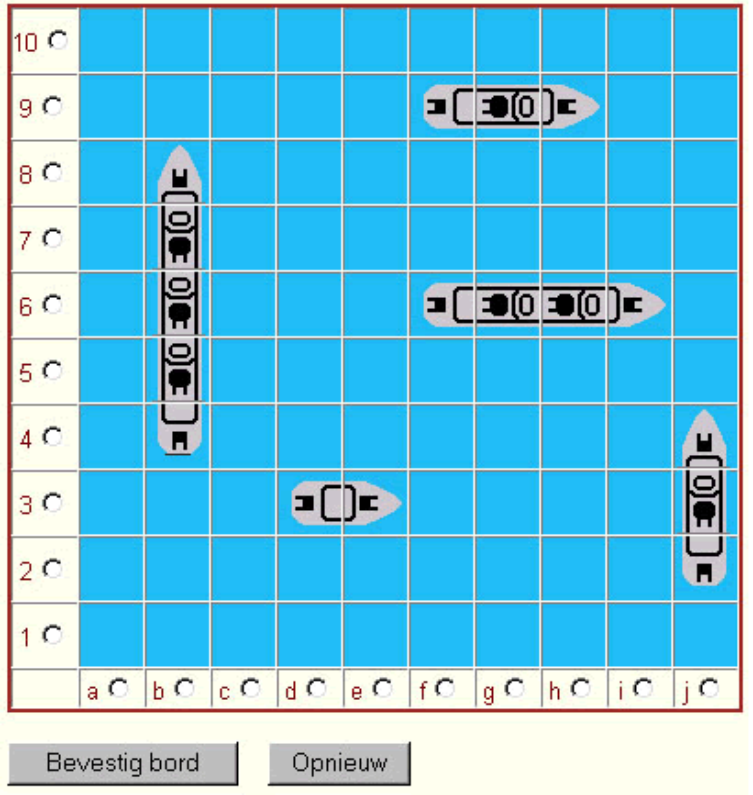
- Boat size: 1x1, Grid size: 5x5
- Boat size increases, Grid size: 5x5
- Boat size varies, Grid size: 10x10



User Interface

TITLE

Instructions
1)...
2)...
3)...

Player

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

Computer

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

Banner

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

R 255 H 48 °
G 205 S 100 %
B 0 V 100 %
FFCD00

Sea (with white grid outline)

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

Hit

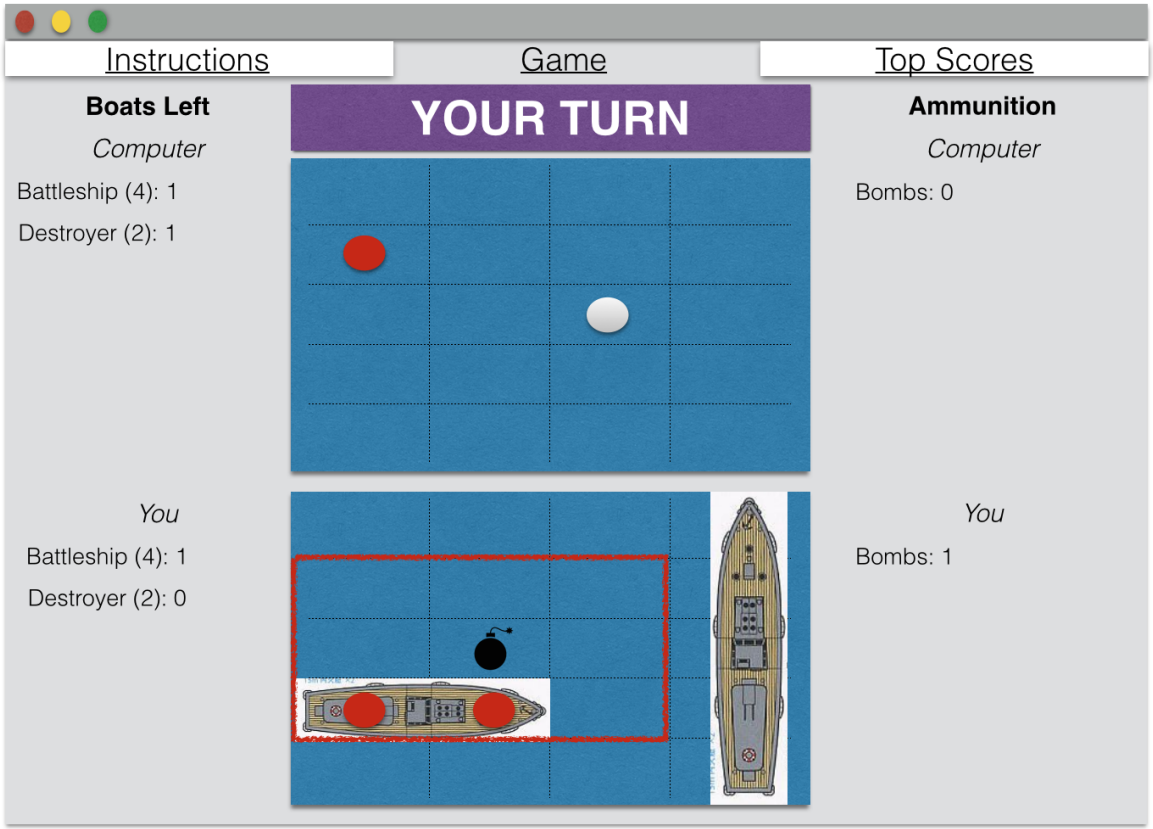
Hex: # CC0000
Red: 204
Green: 0
Blue: 0

Miss

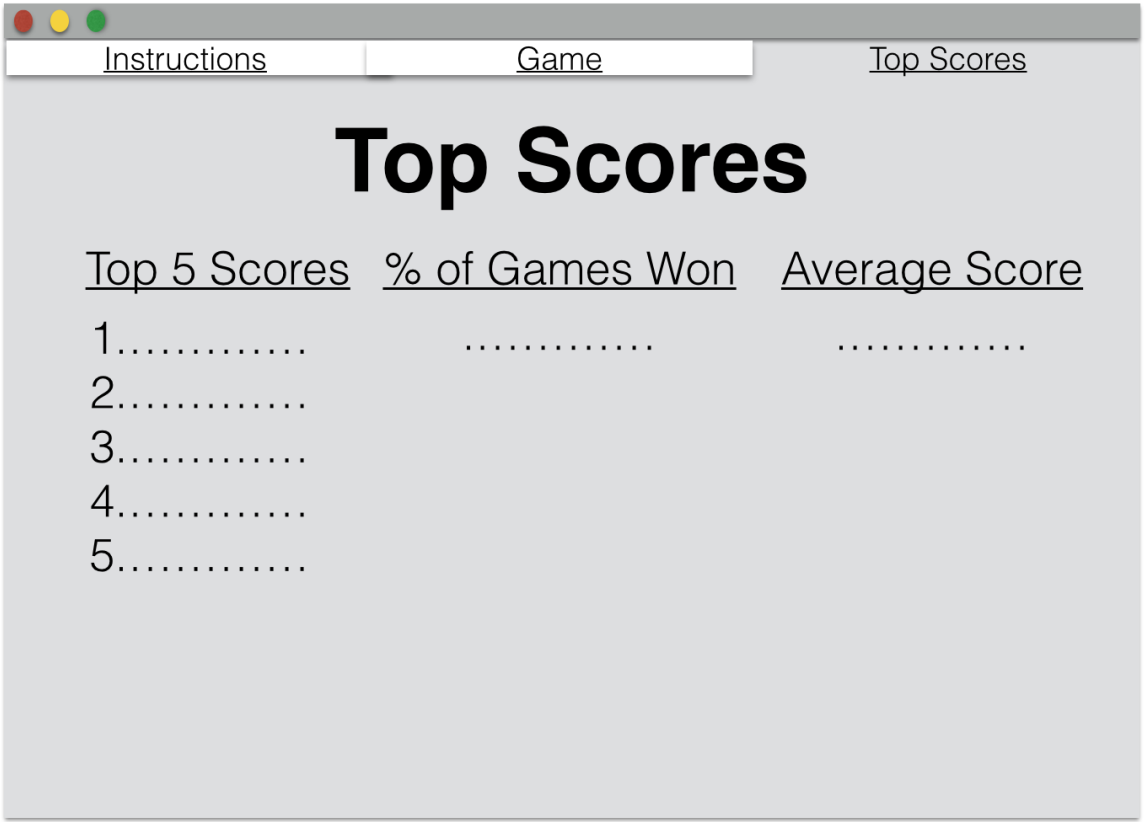
Hex: # C0C0C0
Red: 192
Green: 192
Blue: 192

UI: GamePanel.java

UI: WelcomePanel.java



UI: StatsPanel.java



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