

Minesweeper

NOT A MINE-LESS GAME



Who Are We?



Kona Glenn
CSEG & Math Major
Developer



Marion Duval
Biochemistry Major
Developer



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Product Owner



Clara Chaplin
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Scrum Master



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CSCI major
Developer



Background

Purpose: user-friendly brain game with fun features

Goal: clear the board without detonating any bombs





First Time Player



I saw my friends playing minesweeper
and wanted to play, but when I tried,
there were no instructions and I
couldn't figure it out.





Bored Player



I like to play addicting brain games
with exciting effects during all of my
free time!





Social Player



All of my friends love to compete in
how well we can beat a brain game!





Personal Player



I love to play brain games during my lunch break at work, especially those that are quick and simple yet still challenge the mind!



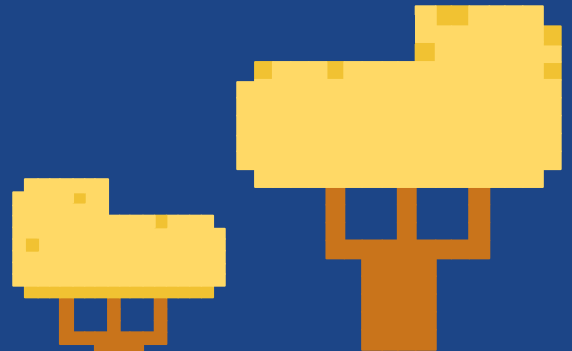
Objects

Cell

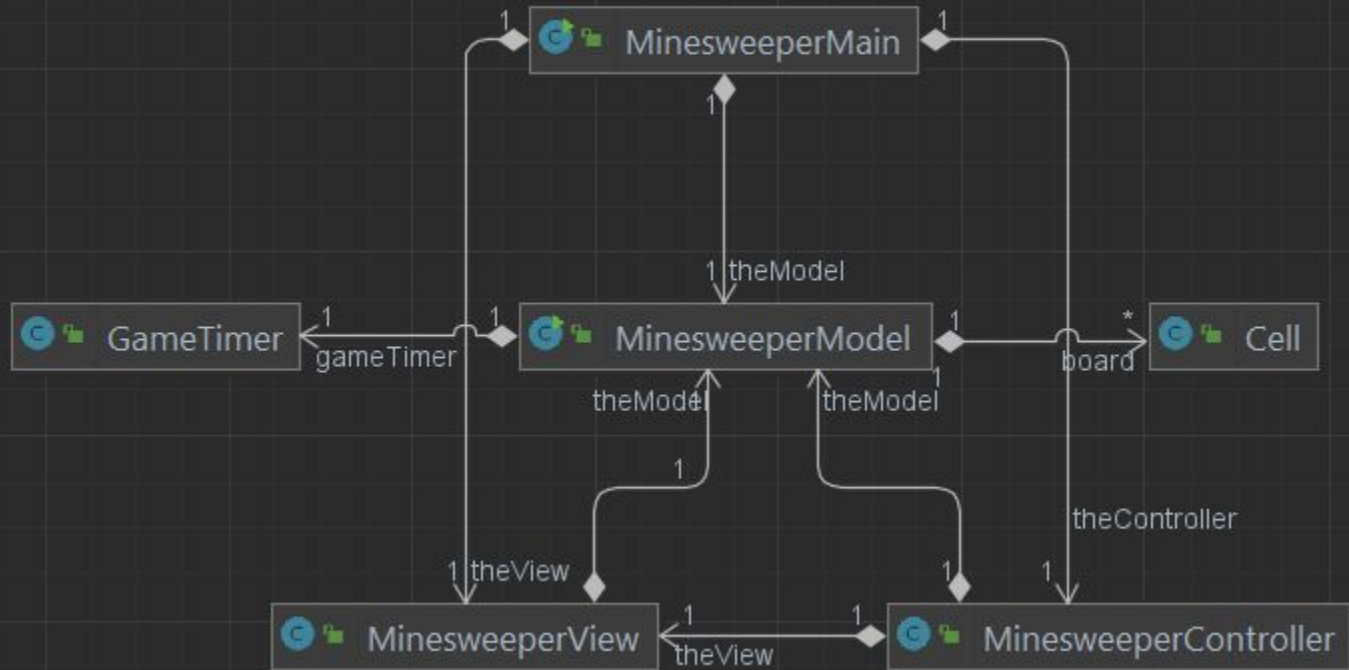
- holds a bomb or numerical value
- assigned a row/column, color, and an image
- represented as squares on the board
- has methods for left and right click

GameTimer

- mimics a stopwatch
- stores current and best times
- has methods that start and end the timer

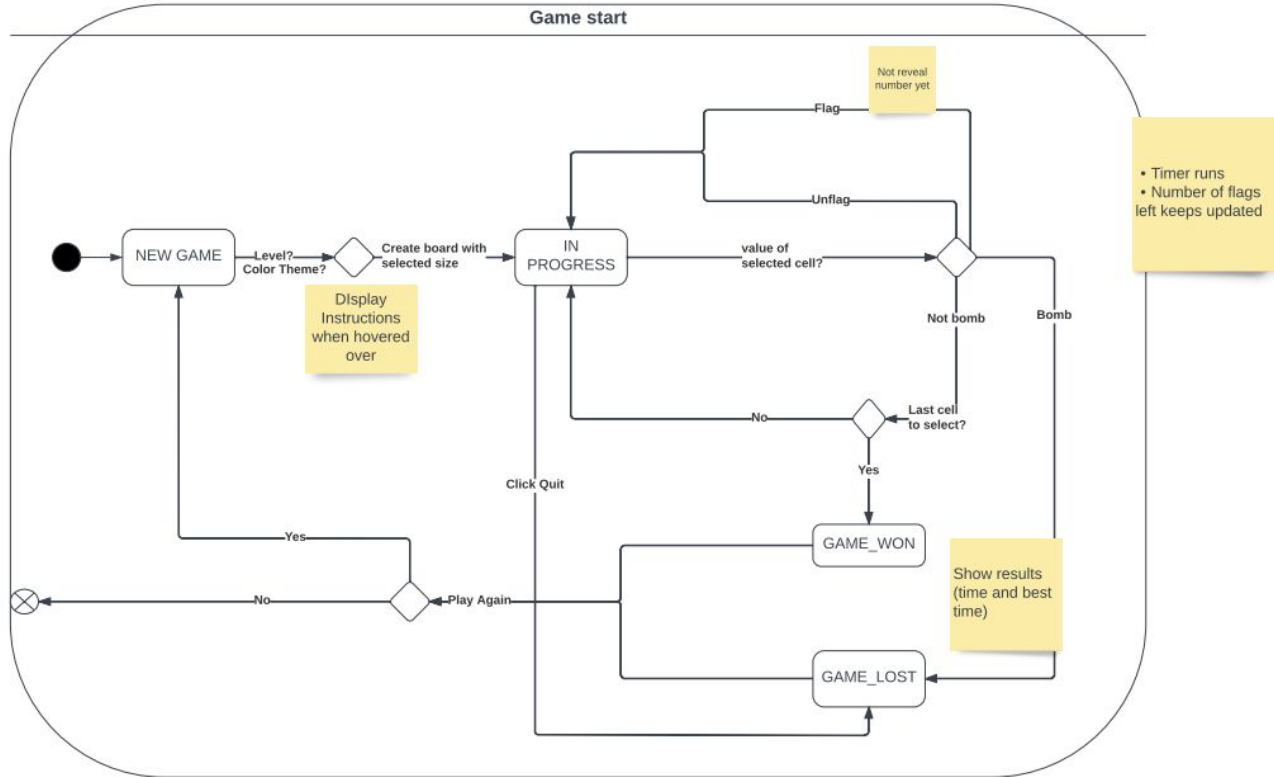


MVC Design





State Diagram





Data Structures & Algorithms



`autoExtendCells()`

`threads`

`resetBoard()`

`2D Array`



top pane

Scene Builder

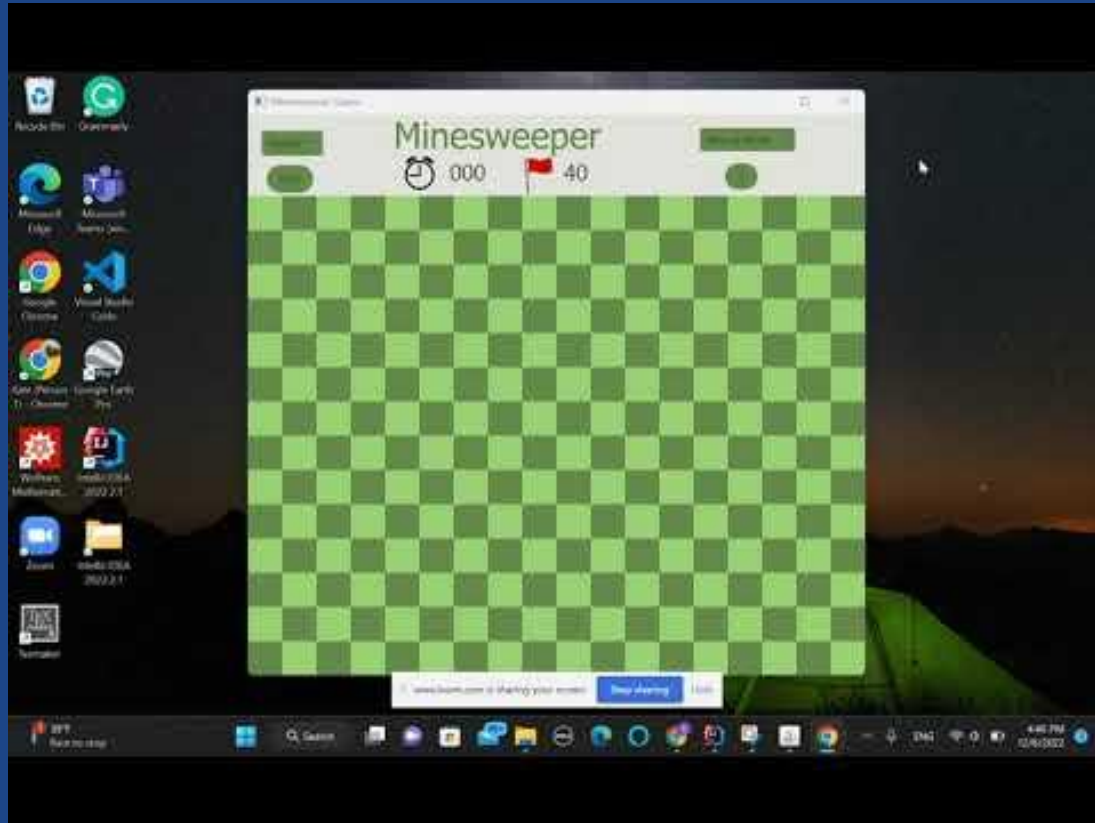
Used to create the top pane and game board for an appealing user interface

board





Demonstration





Reflection



- Scrum process strengths and weaknesses
- What would we have done differently?
- View on future software team projects
- Project implementation
- Time worked on the project



Summary



Smooth running, visually appealing user interface



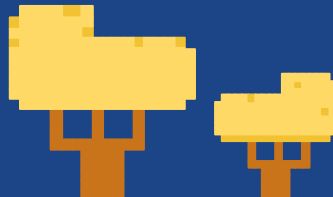
Overcame merge conflicts



Expanded on skills

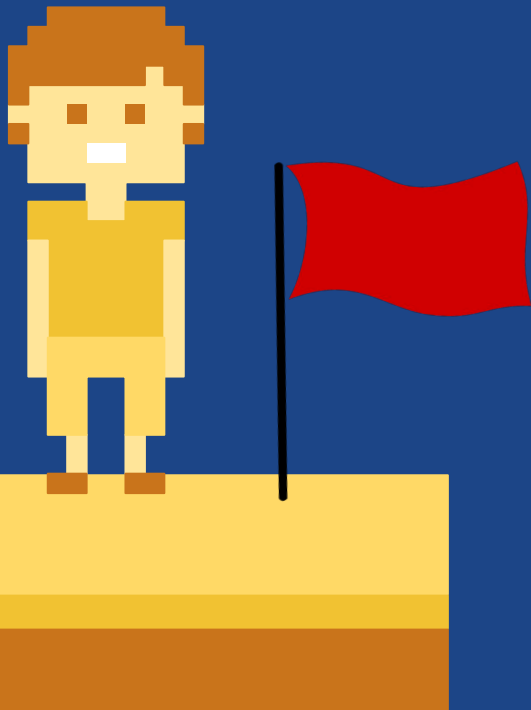


Improved teamwork and communication





Future Features



Hint Button

- Reveal the number value of a random, unopened, unflagged cell

Color Coded Numbers

- Each number is assigned a different color

Holiday Color Themes

- Add relevant color themes depending on the season

Background Music

- Play background music during game play
- Changes depending on the color theme

Work Cited

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