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CSCI 3010 - Intensive Programming Workshop
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Homework 5.2 - Game Night Progress Update

This document is the progress report for the redesigned board game, Blokus.

Here's a quick breakdown of the different sections:

[Homework 5.2 - Game Night Progress Update](#)

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1. The Plan

What you planned on doing for this deliverable. (copy + pasted from deliverable 1)

The following list is copy and pasted from the previous deliverable.

1. Deliverable 2 requires a **low-fidelity prototype** for user testing.
I'll accomplish this using the actual board game once I rescue it from my friends house. I can simulate the random piece choices using three d20s (a twenty sided die) and the abilities with hand written cards.
2. Code:
I'd like to have at least the **Board** and the ability to drag, rotate, and place the board pieces in Shape. This will require me to flesh out the **Shape** class, start into **PlotWindow**, and a placeholder for the **Game** class.
3. If I get that done, I'll start into **Player** if I have enough time otherwise I'll use a placeholder.

I estimate this will take between 12-20 hours based on the last homework. Abilities and game end conditions will be done last and I do not template them to be touched by Deliverable 2.

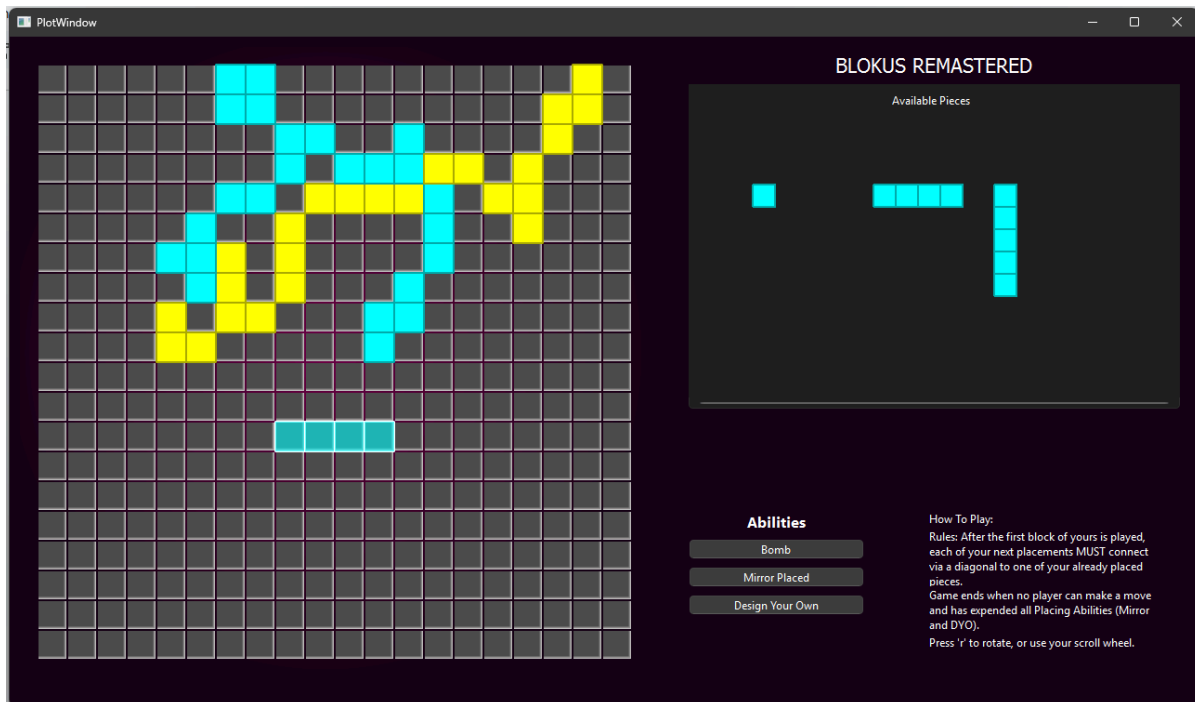
2. Progress

What I actually accomplished for this deadline.

Note any differences and explain why they occurred. Prefer honesty over excuses.

As of Monday the 21st, I have accomplished all above goals.

- I created the GUI first, then added in shapes to their own graphics window that players can click on.
 - Originally, I was trying to get them to drag from that window over before learning that wasn't possible unless they're in the same window. With that in mind I ended up having players able to choose their piece from the right side and then move around a snappable shape. See the following image:



- After the GUI, I added in a couple of default players and the barebones for the game class to organize turns and track game states. Most of this was actually accomplished through the PlotWindow and using QT's event system. The following link was super helpful.
 - Introduction to Qt Widgets (Part 12) - The Event System by KDAB (<https://www.youtube.com/watch?v=yIf-eieQ6UA>) .
- A few quality of life changes I needed to make was highlighting the drag and drop piece, fixing bugs where I'd lose placed pieces when placing a new one near it.
- I added a rotate shape method which was a huge pain. It can be done with either 'R' or the scroll wheel.
- I currently have 10 of the available 21 pieces in the game. I have to draw them out on graph paper to get them in the correct places.

3. What's Next?

What you have left to complete before the final deadline.

1. Get abilities up and working.
 - a. Mirror should be simple enough with the clone shape I already implemented.
 - b. Bomb might be more complicated than originally planned.
 - c. Design Your Own / Wild Shape will need its own window for players to click but it shouldn't be too bad with toggled buttons on a 7x7 grid, limited to 5 pieces.
2. Add in and adjust game end conditions.
3. Get player names to display along with their current score.
 - a. Dynamic display of how many players may also lead me to adjusting the number of pieces players get or the board size. For example, a 1v1 situation has a huge board for the number of pieces and some players won't "attack" the other side of the board and can meander around easily. A smaller relative board size would force competition.
4. Add in the remaining 11 Blokus pieces.
 - a. And add randomness to which are displayed to each player on each turn.
5. Potentially leaderboard with average placed pieces / used abilities per game.

4. How It Looks

Screenshots of where your program is currently at. They don't have to be exhaustive but they should adequately depict the current state of your project running.

Image 1: As shown below, the project is coming together nicely. I'd like to implement a dark version of the current player's turn to replace the background. Right now, it's obvious whose turn it is by the colors of the available pieces, but I'd like to make it more clear.

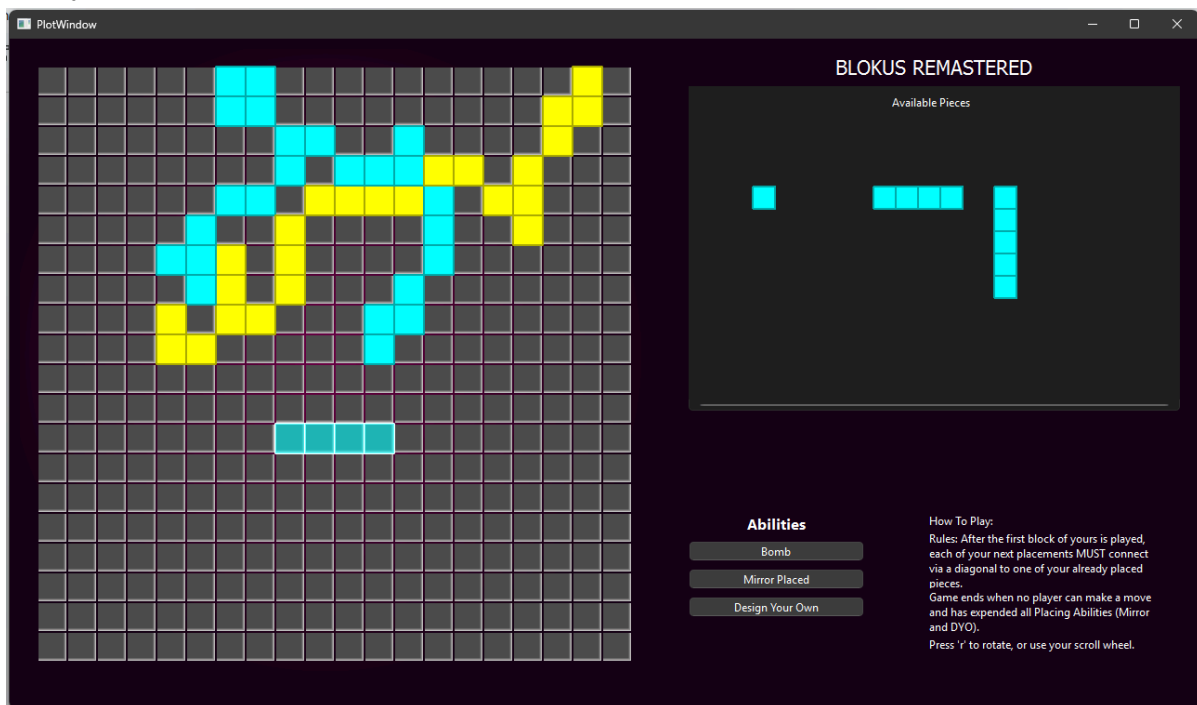


Image 2: Selection visibility:

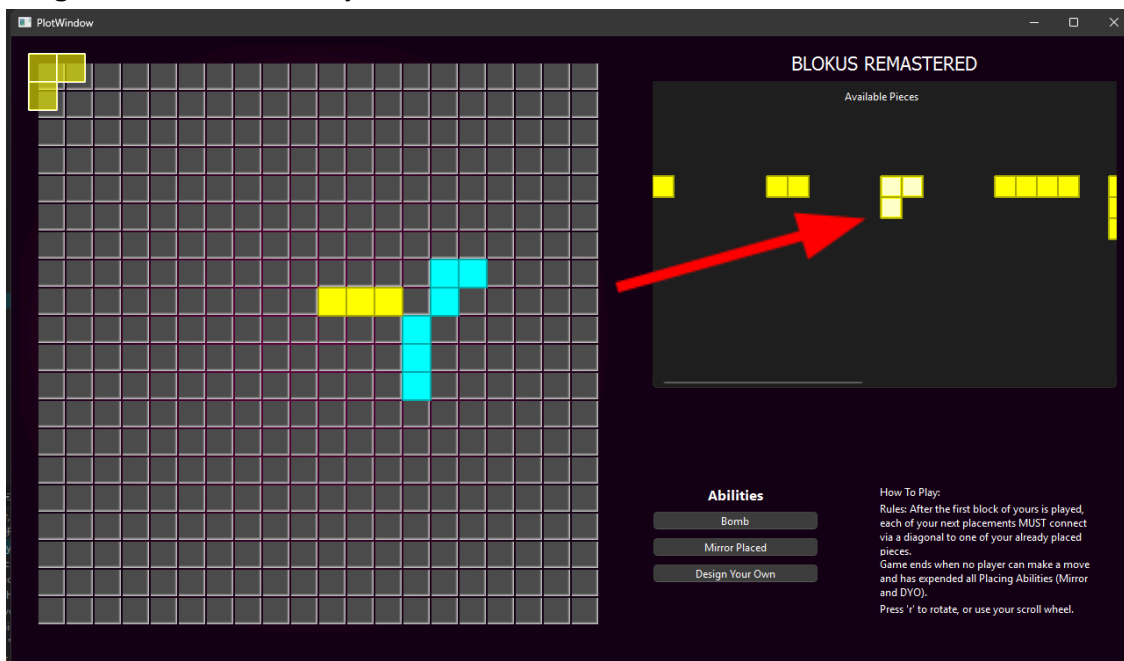


Image 3 & 4: I included these to show rotation.

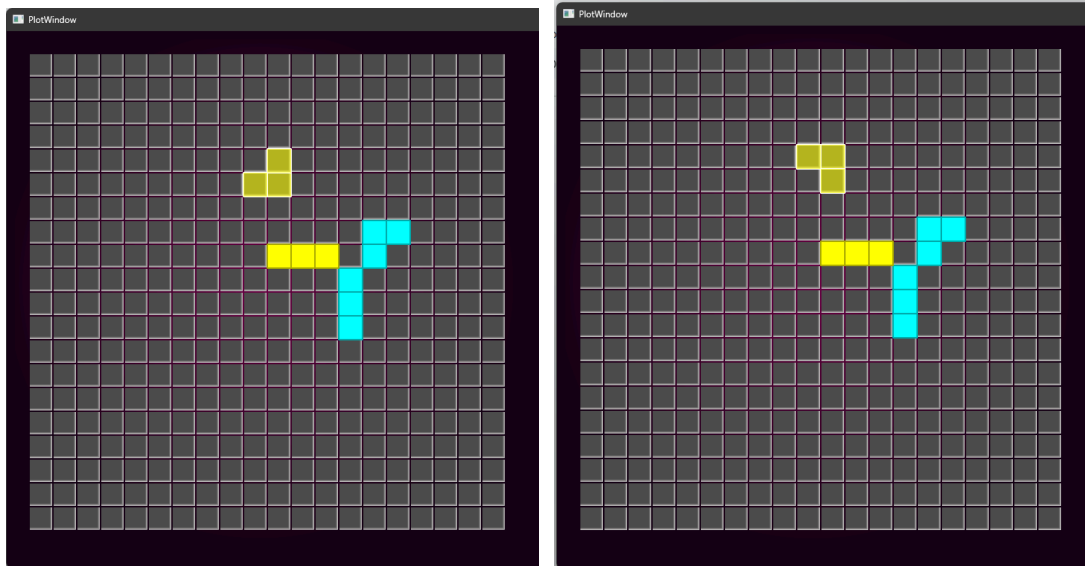


Image 5: Note that after the small L was placed, it is no longer in this player's available pieces.

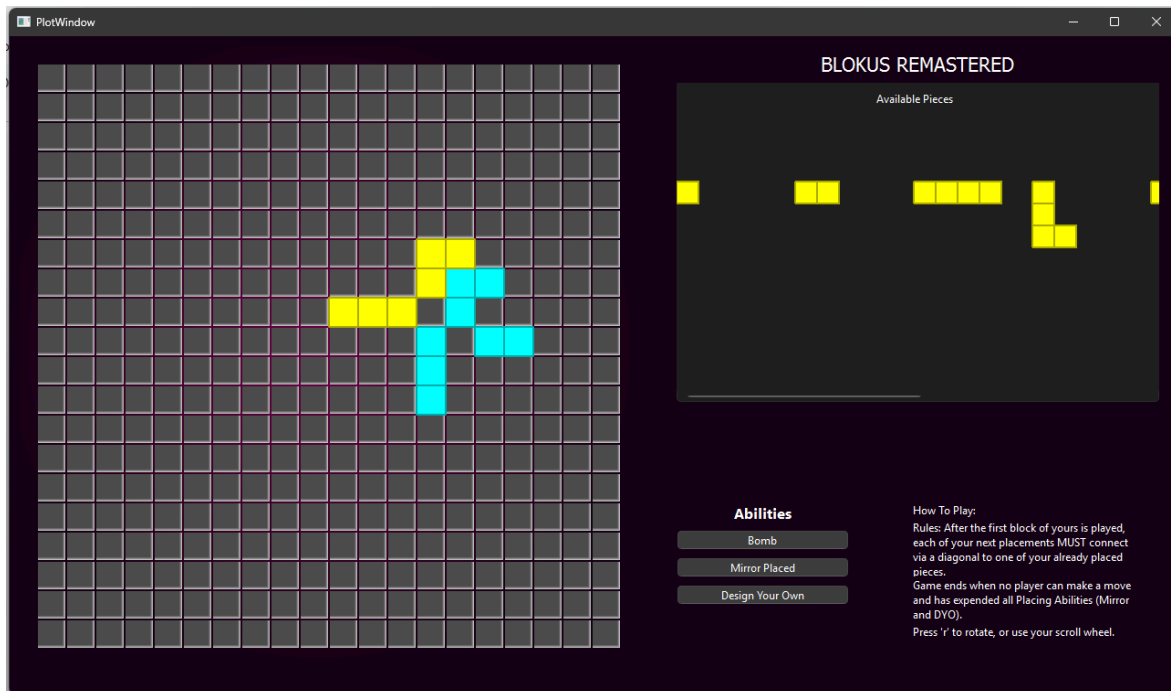


Image 6: Translucent to better see where each piece goes when placing.

