Progress Report 1 – Snake

Name: Brady Carlson
Reporting period: 19-August to 20-September
Total hours worked on project during reporting period: 26
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What tasks did you have listed in your milestone to accomplish during this time period?

The tasks that I outlined to be completed during this reporting period are as follows:

Progress Report 1 Deliverables – Due 20-September
- Design UI of game board (i.e. layout, size, scoreboard, etc.)
- Design game board borders for each type – Standard, Fire and Spike
- Design the snake (head, body and tail)
- Design and record custom sounds including a unique sound for each of the following circumstances:
    - a sound for the start of the game
    - music for each game board type – Standard, Fire and Spike
    - a sound for when a snake eats a piece of food and points are scored
    - a sound for when the game ends by the snake running into itself
    - a sound for when the game ends by the snake running into the Standard border
    - a sound for when the game ends by the snake running into the Fire border
    - a sound for when the game ends by the snake running into the Spike border
- Design menu layout and contents

What tasks have you accomplished during the time period?

This reporting period was very productive. The design of the game board, borders, snake, menu and sounds were all accomplished. In fact, I went beyond just design and implemented a majority of the designs (i.e. game board, score board, cell, borders, and menu). The only thing I fell short on was creating music for all the different border options. I created one piece of music to play at the beginning of a game, but I'm not sure if I want music constantly playing anymore. It seems to take away from the other, more important, sound effects. I have put this deliverable aside for now and will return to it once the game is more operational. At that point I will either create more music or just stick with sound effects.

What new knowledge or skill did you learn? (Describe briefly)

For the sounds and music I used an application called GarageBand. I had no previous experience working with sound effect and music creation applications. It took me a little while to understand how to manipulate my recordings to get the best effects possible. I probably spent too much time recording, re-recording and manipulating sounds, but it was fun and something I hadn't done before.

What have you learned in classes that you have applied to the project during this time period?

In a previous programming class (CS3230 with Dr. Brinkerhoff) I built a Mahjong game. Three classes that were used for that assignment I have reused for my individual project. One class includes the functionality to play sound clips and the other two are the functionality to display game operations and help information. These classes have been reused to serve the same functions in my Snake Game.

What difficulty occurred or what mistakes did you make? What did you do to correct it?

One mistake that I made during this reporting period was jumping into coding too quickly. I created the menu layout and options and thought that I would just write the code for the menu and get the task out of the way. But once I started writing code, I couldn't stop. I started to see the project come together and I became excited to do more. This excitement led to a lot of trial and error. For example, I started building the game board as one piece before I realized that it will be easier to create a game board built up of individual cells. Then each cell could contain the snake, border or food.

To correct my enthusiasm to code, I recognized how problematic this behavior can be. It's fun to code and tweak different aspects, but it's not very efficient. Tasks that I drew out before hand were a lot simpler to implement than the stuff that I dove head first into. Moving forward I will be weary of this inclination and will do my best to not repeat this behavior.

What skill(s) could you use help on in performing your project better?

At this stage of the project I feel confident that I can deliver the project as outlined. I have run into issues, but none that were insurmountable. There are deliverables in the future that I am weary about, like the snake movement and keeping the snake's head facing the right way, but that is why I gave myself lots of time in my plan to account for this.

What interesting or challenging problem did you encounter and what steps did you take to solve it?

Right now I'm figuring out how to put the border and snake in the appropriate spaces on the game board. Each space is essentially a cell, but I'm trying to figure out how to distinguish between the different spaces. One idea is to create a two-dimensional array that will contain a number for what type of cell to paint (i.e. border, food, snake or a regular, empty cell). I did something similar to this with the Mahjong game, except that game used a three-dimensional array to account for multiple layers.

How would you rate your own performance this milestone?

I am my own harshest critic. That being said, I think I did alright. I am ahead of schedule and

am much further along than I could have hoped to be. Aside from that, I am also pleased with the quality of the work that I've created so far.

Additional comments

Below are some screen shots of what was completed during this period. The entire project can be found on GitHub at https://github.com/bradycarlson/MySnakeGame. I also attached an executable jar file to the assignment so that you could see the menu and functionality so far.

This is a cell.

This is the standard border (all borders extend the Cell class).

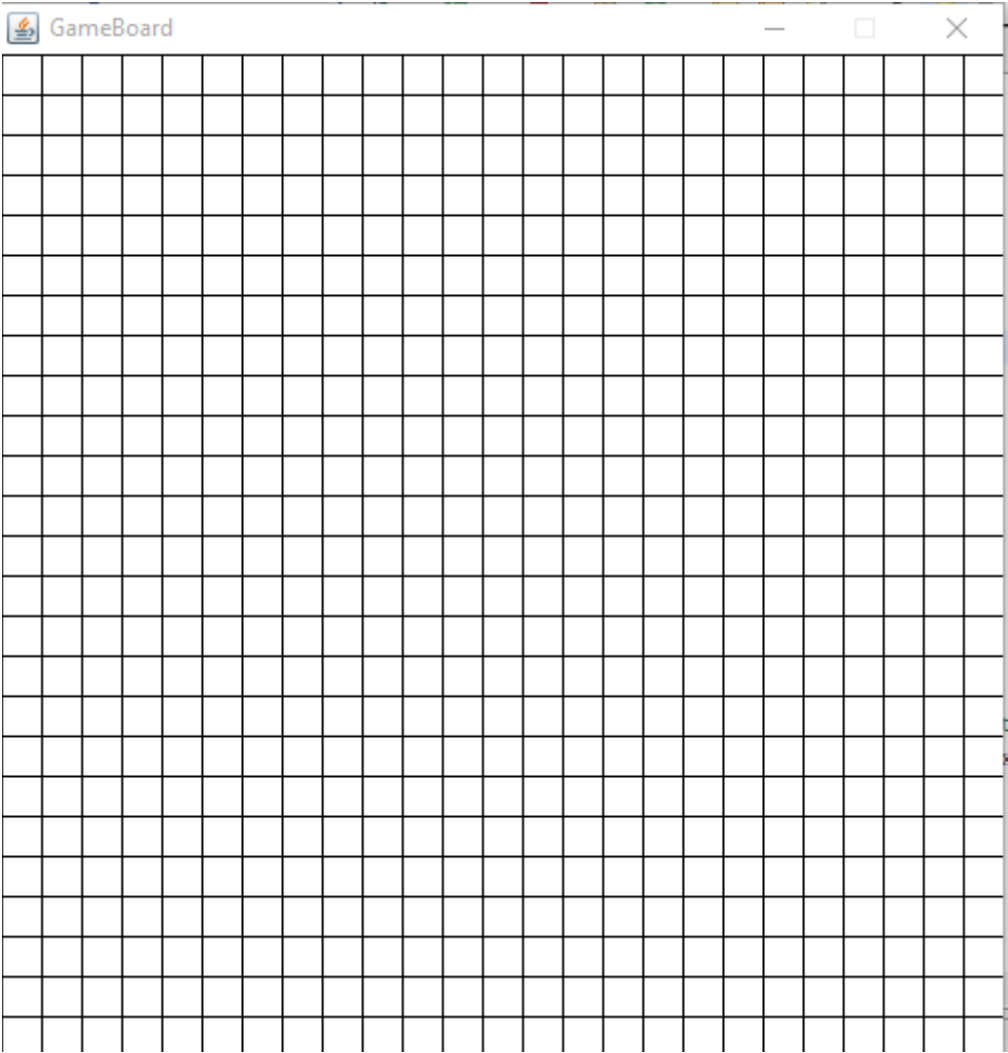
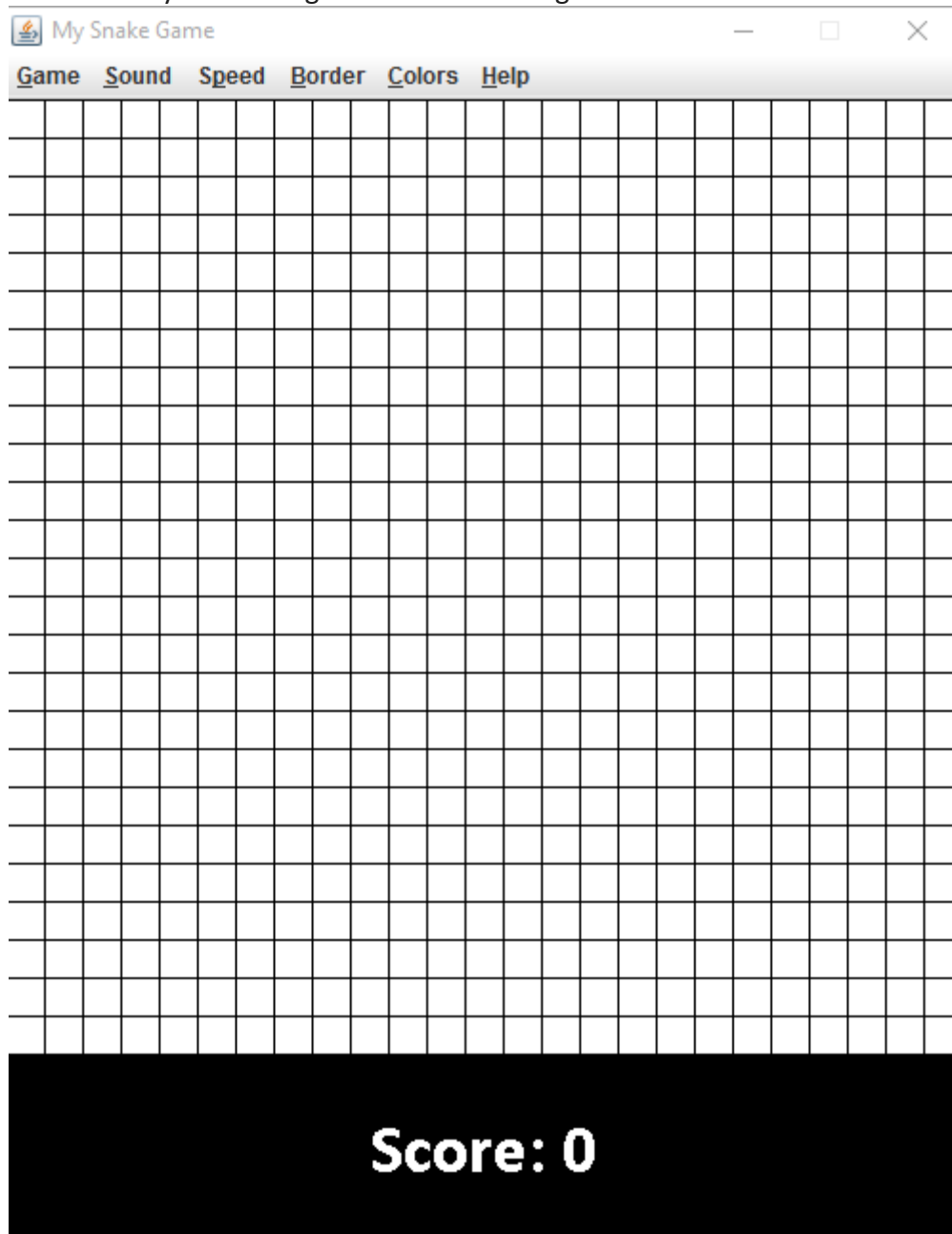This is the spike border.

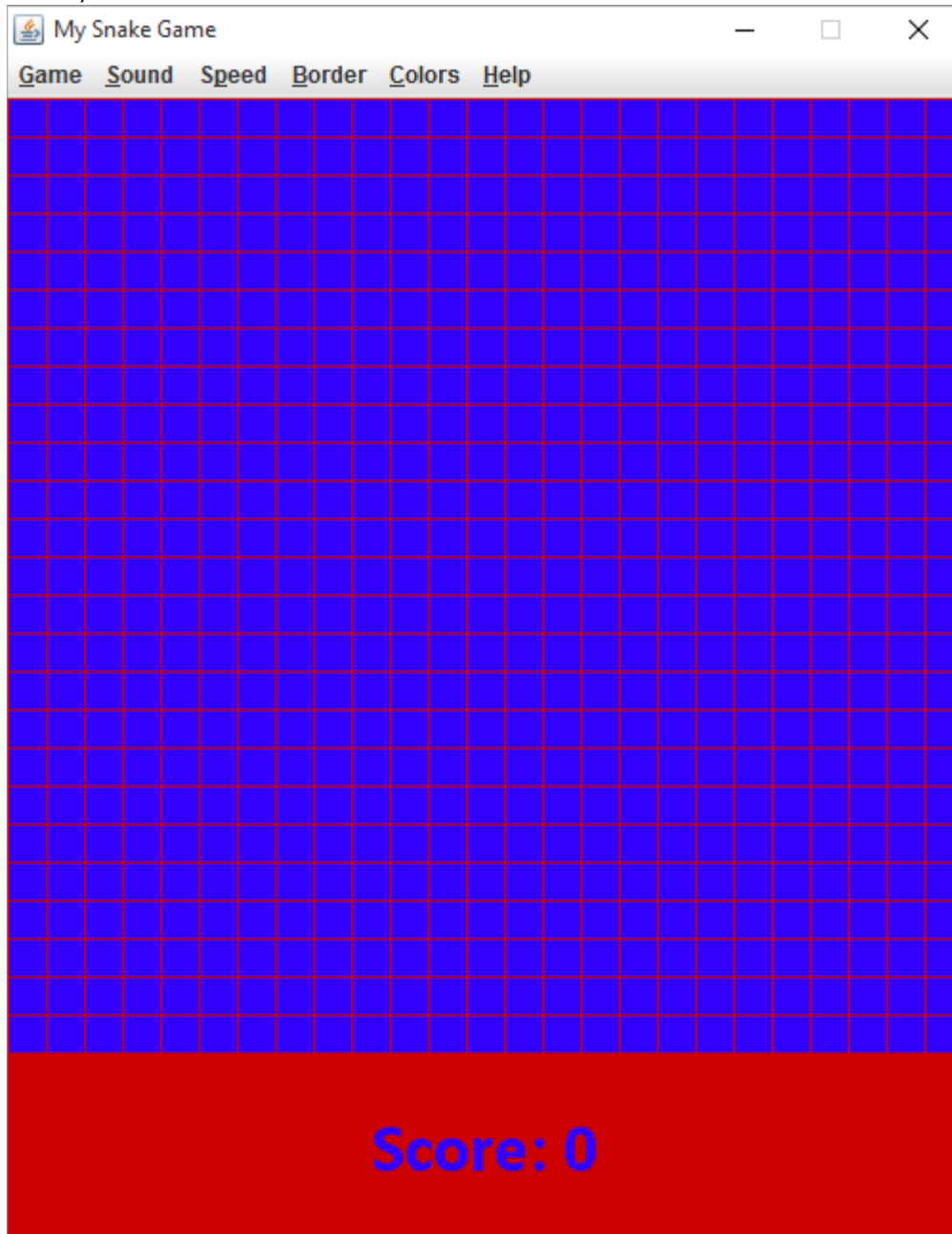This is the fire border.

This is the score board.

This is the game board.

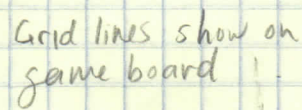This is the layout of the game so far including the menu.

Here is another picture of the game with different colors (which are controlled in the Colors menu).

Finally, the next page are my initial design sketches on graph paper.

MY
SNAKE
GAME

← 5ΦΦ →   ← 5ΦΦ →

2Φ

25 cells

- 250
|
250

Grid lines show on
game board !

Score: ⊘ (centered)

HEAD   BODY   TAIL

2Φ

2Φ   2Φ

2Φ

                        colos 1
                        colos 2

*Head & tail will have to rotate based on movement...

STANDARD   FIRE   SPIKE

2Φ   ↑   — white
         — solid   ↑   — blue   always
           color   ↑   — yellow
                      ↑   — orange   — solid
2Φ   — Red   color

5ΦΦ
65Φ
15Φ

65Φ