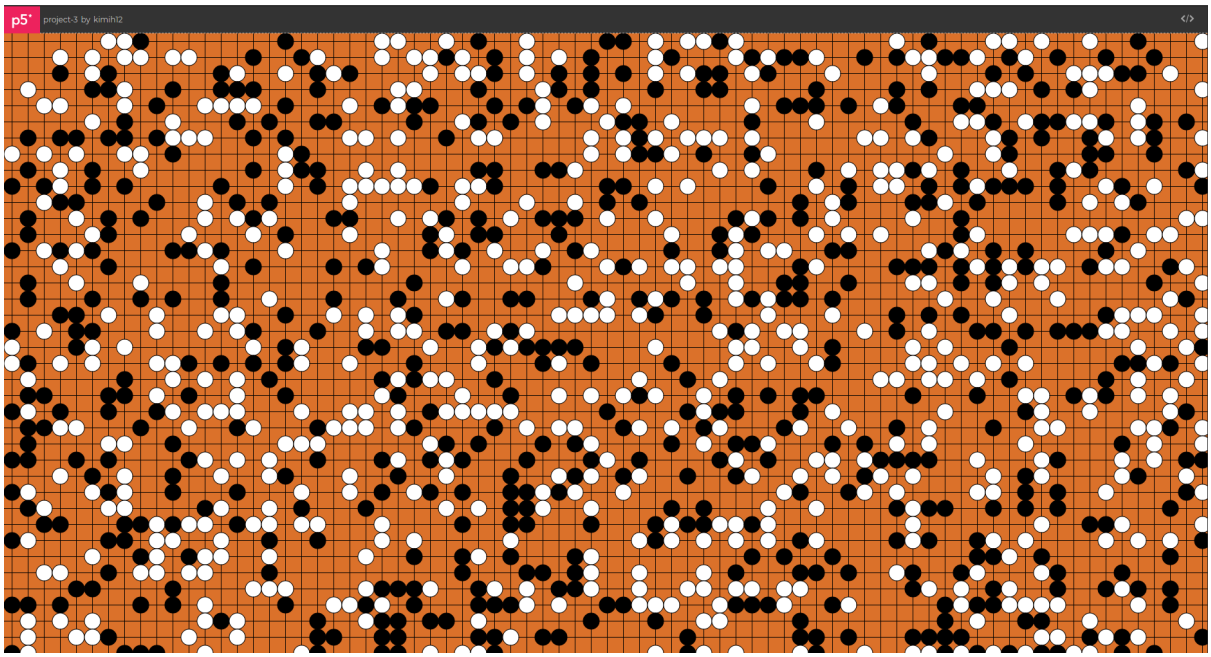
Project 3 - Interactive 2D Pattern

Web preview
(https://editor.p5js.org/kimih12/full/y1r7tN_bc)

Student information

- Name: Inho Kim
- Major: Computer Science and Engineering
- ID: 20161577

Application design



Title

> Reversi

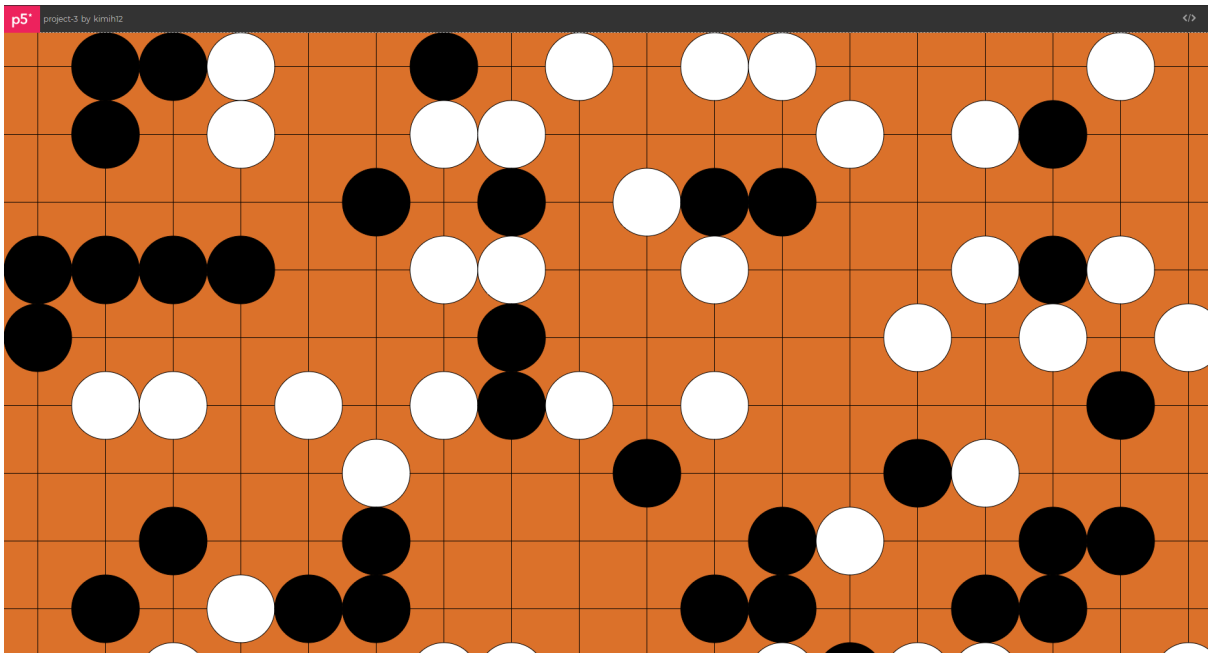
Target users

It would be interesting to have this 2D pattern for people with a portfolio related to the gaming industry.

Features

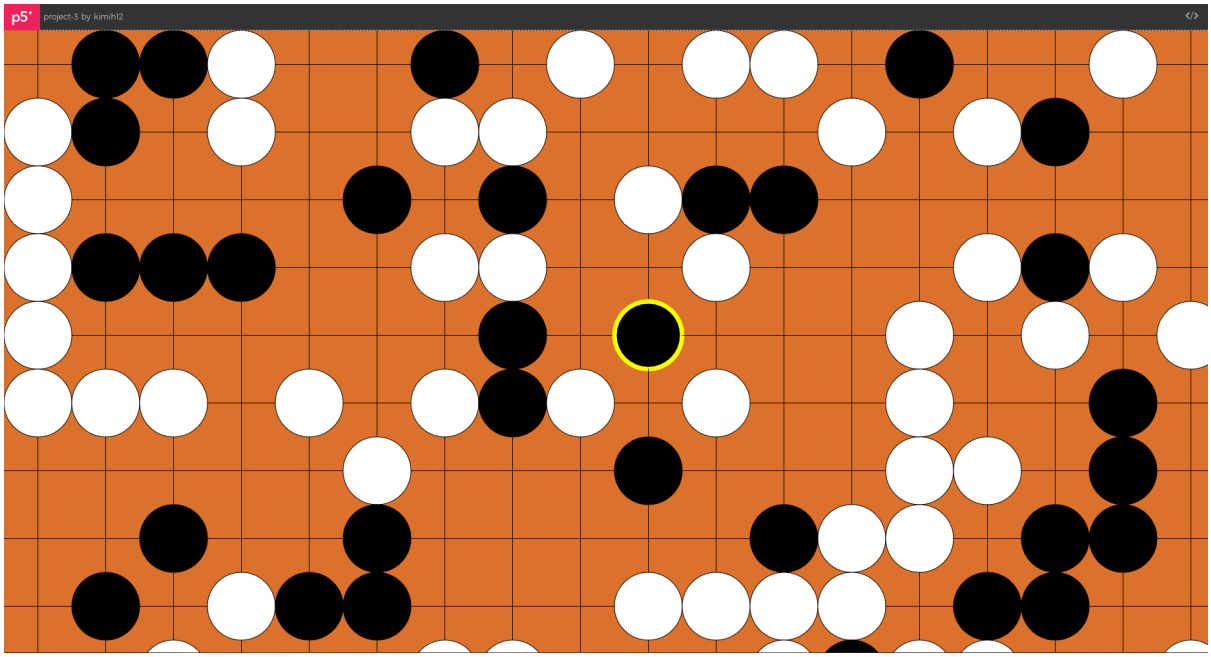
- Grid size option

Scroll in order to adjust the grid's size.



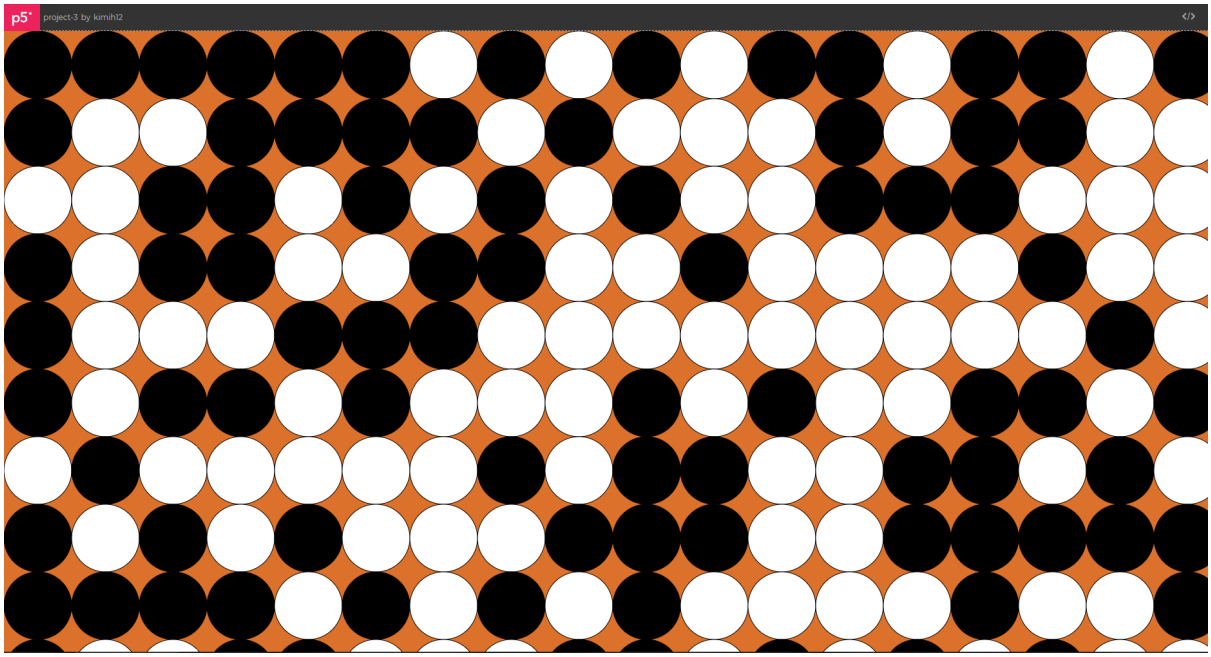
- Play the game

If features a very naïve implementation of human VS computer game of Reversi. The user gets to play the white stones, and the computer will play the black stones. Do a click with the mouse's wheel to place the stone. The computer will do its turn after a second. The latest stone placed by the computer is highlighted with a thick yellow stroke around it.

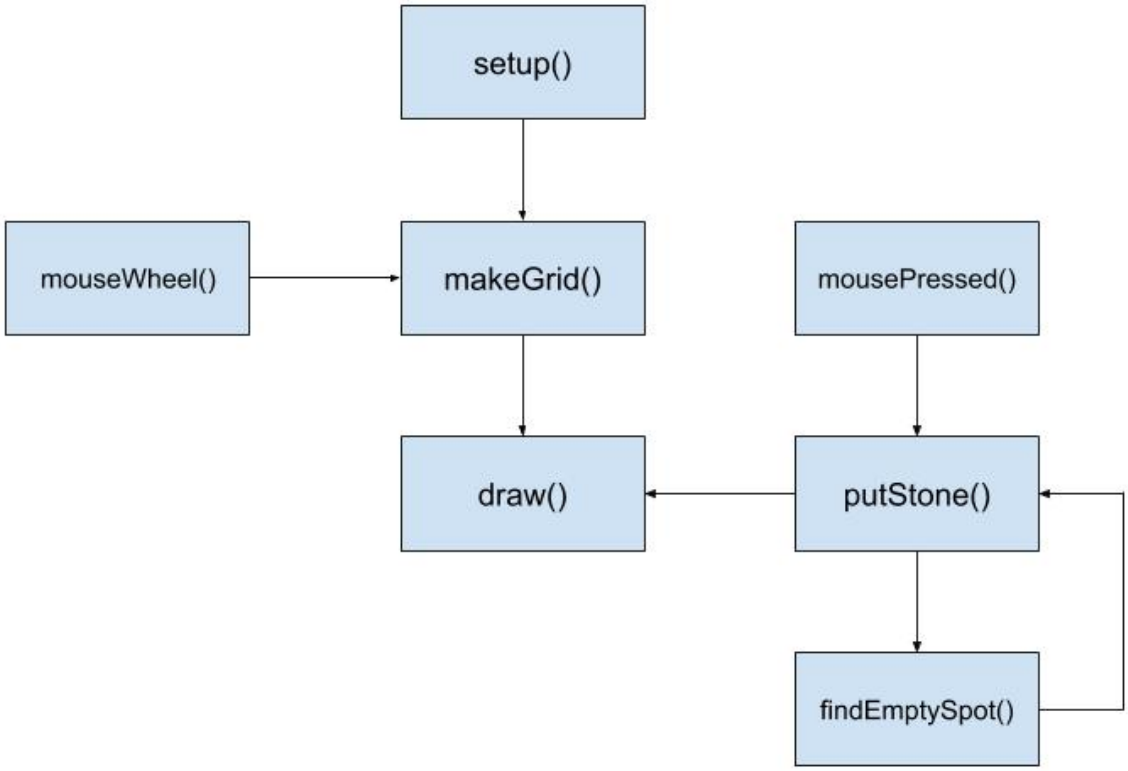


Visual concepts

This pattern creation was inspired by the game of Go. A completed game of Go always seemed to be an interesting pattern for me, so I wanted to create a similar randomized pattern. And to add some interactivity, I implemented a simple computer player.



Algorithm



In its initial state after `setup()`, the `makeGrid()` will generate the new grid with the initial grid size. Then the `draw()` function will take care of drawing on canvas according the the content of the grid.

When a mouse wheel event is detected, the `mouseWheel()` function will catch it. According to the direction of scroll, the grid's size will be modified. The new grid with the changed grid size will be generated by the `makeGrid()` function.

When a click with the mouse's wheel is detected, `mousePressed()` function will catch it. This will place the white stone where the mouse is located using the `putStone()` function. Within the `putStone()` function, there will be a recursion if any empty spot is found using the `findEmptySpot()` function. Finally, the `draw()` function will render the canvas with all the changes that occured.