Game Design Document

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1 Goals and Requirements

1.1 Context

Cornered Reversi is a game taking the rules of the classic game of reversi and adding a slight twist to it, increasing the possible state of a cross to 5 from three, making the game run much faster while adding another layer of thinking. It was made when I tried to think of a simple idea related to limited space.

1.2 Team

Design, Programming and Art-Bill Cao

1.3 Goal

1.3.1 General Goal

To make the game implementing the altered reversi rules, which should work regardless the size of the gameboard. The game should be allow players to take turns placing pieces and end when there is no space on the board.

1.3.2 Mechanics

The core mechanic is a revamped reversi rule which is detailed below:

1. The players use either white or black pieces and the player with the white piece would go first.
2. Players take turns placing their pieces in an unoccupied and unplaced cross.
3. A cross is placed when a solid piece is placed on it.
4. When a piece is placed, if there are crosses between or on the extension line between this piece and any friendly piece without interruption or a placed enemy piece, these spaces are occupied.
5. Occupied spaces count towards occupation count and the game finishes when there is no more space on the board.
6. The game is won by the most occupation count.

1.4 Requirements

- An alternating placing mechanic.
- A mechanic to expand any occupation or override any occupation, that can work regardless the board size.
- A piece counting mechanic that will be used to both display current difference and calculate winner.

2 Gameplay and Mechanics

2.1 Gameplay

2.1.1 Game Progression

In the walk-through, two players would alternatively place pieces onto the board until there is no space, at which point the game would end annoucning the winner.

2.1.2 Objectives

The objective of the game is to have the most occupation when the game ends.

2.2 Mechanics

2.2.1 Placing Pieces

An available space is indicated by the green tint on the location and the next piece to be placed moves with the mouse. The game would forbid any placement of pieces outside of the grid.

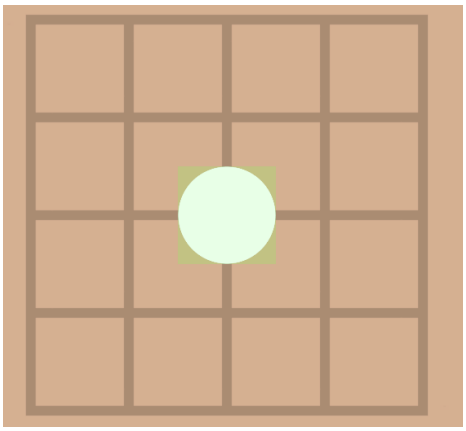

Figure 1: Placing the first piece

2.2.2 Occupation

As shown in figure 2, an occupation can occupy any free space between and beyond two unblocked pieces, the occupation is indicated by semi-transparent pieces to distinguish them from regular placement.

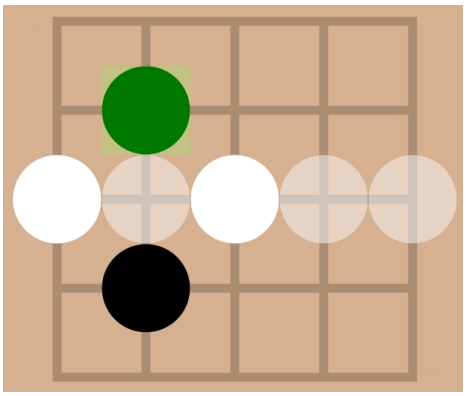

Figure 2: Occupation

2.2.3 Reoccupation

As shown in figure 3, an occupation can be overwritten by another occupation, and placing a piece on occupation is forbiddne indicated by the red tint on cursor.

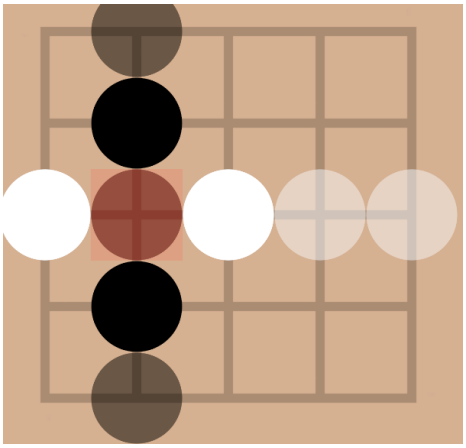

Figure 3: Reoccupation and trying to place a piece on occupation

2.2.4 Ending

As shown in figure 4, the game ends when all available spaces are occupied, the victory is calculated by the number of occupation for each player. For example, black has 13 spaces occupied while white only has 12 spaces occupied, hence black won.

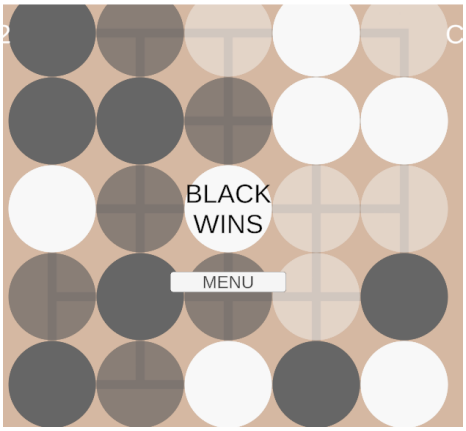

Figure 4: Ending