## Chess Royale: Initial Board Set-up and Piece Movement Group 5: Dan Hrubec, Joseph Canning, Julian Gonzales, Victor Fong

Chess royale is a combination of the classical game of chess along with the new game format of battle royale type games. Chess royale has a maximum of 8 players, starting off with a board size of 24X24. The goal of the game is to survive as long as possible while trying to take out other players. In addition to the increased board size, there will be new additional tiles, upgrade tiles and death tiles. These tiles will be randomly generated within the board, and players will need to use them to their advantage.

After each player makes their moves twice, the board size will decrease in size. For example, after the first two rotations, the board size will decrease to a 21x21 sized board, then an 18x18 and so on. The new upgrade tiles will be marked as green tiles and when players land on an upgrade tile, they will have two options. They can either teleport to a new tile on the map with the exception of moving to a space that another player is already occupying. The other new tiles are death tiles, and are red tiles on the map. Like its name, if you move onto a red tile, you lose.

## **Scenario "Game Mechanics"**

For this scenario, the game will be implemented with local multiplayer or a cheat menu so that multiplayer over the internet can be implemented for the next scenario. One player will be able to move all pieces on the board. Unity will be used to create this game. The user will play the game by downloading and running an executable file. Sprites and other art assets that are available for free will be used when possible.

The user will be presented with a landing screen where the user can start a new game. On their screen will simply be a button that says "New Game" below a message welcoming them to the game.

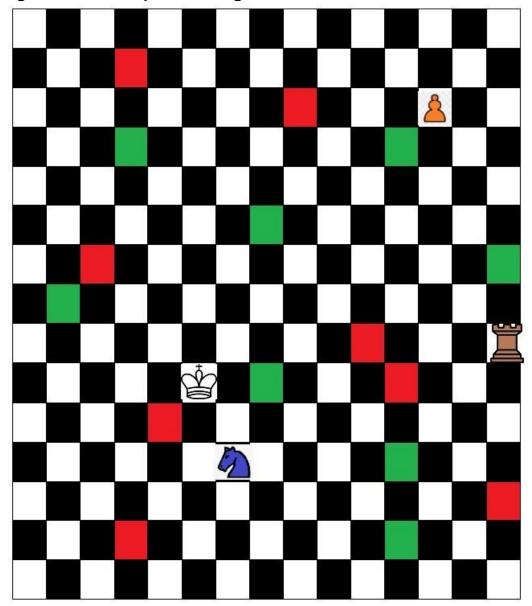
On pressing, "New Game," a two-dimensional, 24x24 chess board will be displayed with a traditional checkerboard pattern. To the left of the board, the status menu will show the names of the eight players who are participating in the game. The pieces on the board are identified by color: a player's name's color will always match their piece's color.

The player, and all other pieces, will start as kings and will start on random spaces. All chess pieces will be available to control with identical movement to chess. The player will be able to eliminate other pieces with the piece that they are controlling which will result in their piece being upgraded to the piece that they have just eliminated if that piece is better than the one they are already in control of.

Players will be forced into a smaller space as the board shrinks after every two full player rotations. When the board shrinks, red "death spaces" will appear at the edges of the board and eliminate any pieces that sit on them. Green "upgrade spaces" will appear in random spaces every three full player rotations.

The game will end when only one piece is remaining on the board or when all pieces have been eliminated. The player whose piece is the last one on the board is the winner.

Figure 1.1 - Sample 15x15 grid



In the following figure, it depicts a sample board when the grid size goes down to a 15x15 board. The players will go in a rotation to move each of their pieces while trying to avoid the outside of the board, as the size will decrease after two full rotations. It shows each of the different tile types, as well as a potential game state.