Chessborne

Release Notes

|  |  |
| --- | --- |
| **Group Members** | **Ryan Kalan**  **Kevin Tayah**  **Jace Beaudoin**  **Brandon Kolle**  **Tharunkumar Mallireddigari** |

**Table of Contents**

1. **Introduction**

1.1 Purpose of Document

1.2 Scope of Document

1.3 Definition Glossary

1. **Final Deliverable**

2.1 Status of final deliverable

2.2 Features implemented

2.3 Features not implemented

1. **Issues**

3.1 Bugs/Severities

1. Introduction

**1.1 Purpose of Document**

This document will provide specifics to the August 24th, 2020 release of Chessborne. This document serves as an outline of the game deliverable for all developers and shareholders to ensure that the final version of the game contains all necessary features/requirements.

**1.2 Scope of Document**

This document provides a thorough report of the August 24th, 2020 release of Chessborne, which includes features implemented and yet to be implemented. In addition, any bugs found within the application will be noted along with the severity of the issue. Areas like feature functionality, performance, and security are considered when documenting the release notes.

**1.3 Definition Glossary**

* **Check:** The state a player is in when an opponent’s piece can capture the king on the next turn. The defending player must move their king out of harm's way or capture the attack piece. If they cannot, they are in checkmate.
* **Checkmate:** A win state for a player in which the opponent’s King is in check, and cannot move their king, or capture the attacking piece.
* **Castling:** A move where as long as the King is not in check, has not moved, and if any of the Rooks have not moved can make a move where the King moves 2 spaces towards the rook of choice and the rook will pass by the King and land on the square adjacent to the King on the other side. This can happen only if above conditions are met and if the King will not move through check and if the shares between the King and rook are clear.
* **En Passant:** If a pawn moves two square forward and lands adjacent to another pawn to its East or West side, the adjacent piece can capture the pawn en passant or in passing by landing on where the previous moved pawn would have landed if it had moved one square forward.
* **Piece:** The game pieces in chess and their movements as long as another piece doesn’t occupy that tile. For clarity, directions are described as North, South, East and West as if the player is looking at the board head-on.
  + King: Can move one space in it’s adjacent 8 spaces
  + Queen: Can move any distance in 8 directions
  + Rook: Can move any distance in the 4 cardinal directions (North, South, East, West)
  + Knight: Can move in an L-shaped pattern. For example, North->North->East. The first two directions must be the same, and the final direction must be perpendicular to the first two directions.
  + Bishop: Can move any distance diagonally in 4 directions (North-East, North-West, South-East, South-West)
  + Pawn: Can move two spaces North on their first move, or one space North on their subsequent moves. They can only capture on diagonal tiles in front of them.
* **Capture:** A piece can eliminate another piece on the board by moving on it’s tile, as long as it’s an opponent's piece.
* **Board:** A grid consisting of 8x8 tiles, usually with alternating colors on every other tile.
* **Turn:** A turn consists of one move, from one player.

2. Final Deliverable

**2.1 Status of final deliverable**

Chessborne is a two-player game designed to be played remotely from a web browser anywhere across the world. When one player joins the main game lobby, they will wait until the other player goes onto the site and joins the main lobby as well. Once this occurs, each player randomly starts as either white or black and begins to play chess. If any other player was to join the site and try to enter the game lobby, they will be spectating the game between the first two players who joined. This game will be played exactly like a live chess game. The game ends when a checkmate occurs, a player resigns, or a tie occurs.

In this release, two players can play a remote chess game. Two players can connect to the application and initiate a game. As previously mentioned, any following connections to the application will be guided to a spectator role. This release holds the gameplay logic that allows players to run through a game and determine a winner in the event of a checkmate. The application is set to go live on August 24, 2020.

**2.2 Features implemented**

* From August 24, 2020, the application can be consumed by end users in production where the application will allow any two players to play a game of chess remotely. At the conclusion of a game, a player will be crowned winner if the game does not result in a tie. Once a game is complete, a new game can be started.
* Chessborne ends when a checkmate occurs, a player resigns, or a tie occurs.
* Any additional connections after two will be able to view the game as spectators.
* Only players are able to move their respective color pieces (they cannot move other opponent’s pieces)
* An opponent's board will refresh once a move is made.
* Move validation occurs to fulfill the rules of chess.
  + All pieces, except knight, cannot move through other pieces.
  + Taking an opponent piece move validation (piece that is captured is removed from the board)
  + Move validation when in check
  + Move validation when in checkmate
* Special chess rules/moves - castling
* Restart ability - new game can be started once current game comes to end
* Essential dialog in console boxes for players to identify when it is their turn/move

**2.3 Features not implemented**

* Special chess rules, such as en passant

3. Issues

**3.1 Bugs/Severities**

1. Fixed Bug (minor severity): User was able to join game without entering username in previous release (e.g. null)

* Does not create backend issues, but such scenario will now default user to “guest” username
* **Status: Resolved**

1. Bug (major severity): issue in identifying when a king is in check in certain scenarios. Having a state of check is not properly executing chess rules throughout gameplay.

* Severity is major as bug will impact gameplay and product quality
* **Status: Not resolved**

1. Bug (major severity): issue in capturing opponent piece when x player piece is used to capture x opponent piece (x refers to the same type of piece). The bug is that the piece that is used to capture the opponent's piece results in the color of the opponent's piece until the piece is moved.

* For example, if a black pawn is used to capture a white pawn. The black pawn position updates, but the color changes to white until it is further moved.
* Severity is major as bug will create confusion during gameplay and will impact product quality
* **Status: Resolved**

1. Bug (major severity): issue in performing the castling special chess move. The rook and king do not move to proper tiles when the en passant move is triggered.

* Severity is major as bug will create confusion during gameplay and will impact product quality
* **Status: Resolved**

5. Bug (major severity): issue in performing the en passant special chess move. Capturing via en passant causes the capturing pawn to remain in the old location but captures the new piece.

* Severity is major as bug will create confusion during gameplay and will impact product quality
* **Status: Not Resolved**