

Status Report

Project Title: ChessGame

Report Date: Mar 6, 2024

Objective

To develop a fully-functional chess game application using C# with .Net Framework, incorporating all standard chess rules and an intuitive graphical user interface.

Key Milestones

- Chessboard initialization logic completed.
- Piece set-up and reset functionalities implemented.
- Player turn switching and move validation logics developed.
- Endgame detection for checkmate conditions implemented.
- User interface developed with chess piece icons and interactive buttons.

Team Members:

Student 1: Eddie Xu - A01188464

Student 2: Jeffery M Joseph - A01357857

Student 3: Samuel Park - A01342847

Contributors

[Eddie Xu]

Contribute:

- Game Initialization Logic: Orchestrated the foundational setup for the game by designing and programming the initial state of the chessboard, ensuring that all pieces are correctly positioned at the start of each game.
- Piece Movement Integration: Engineered the movement logic for all chess pieces, taking into account the unique rules and movements of each piece type.

[Jeffery M Joseph]

Contribute:

- Initializing Piece Images: Implemented the initialization of piece images in the game, linking the visual representation to the underlying game logic.
- Initial Code Review and Testing: Performed the first round of code reviews, focusing on ensuring adherence to coding standards and identifying potential bugs. Conducted preliminary and concluding testing to validate the functionality of the chess pieces and the game's state after each move.

[Samuel Park]

- **Resources Collection:** Gathered and optimized a collection of image resources for the chess pieces, ensuring high-quality visuals and proper licensing.
- **Feedback Support:** provided support in quality assurance by offering to participate in user testing and providing feedback from a player's perspective, which was invaluable for refining the user experience.

Challenge: Complex Rule Implementation

Description: The castling move in chess, which involves a player moving the king two squares towards a rook on the player's first rank, then moving the rook to the square over which the king crossed, proved complex to implement due to the multiple conditions that must be checked.

Mitigation: Development of the castling functionality is ongoing. We are consulting additional chess rule sources to ensure the rule is implemented accurately.

Risks and Issues

Risk: Incomplete Castling Implementation

Description: The castling move is a core component of chess strategy and its absence could impact the user's gameplay experience.

Mitigation Plan: Prioritize the completion of the castling feature in the next development sprint. Implement automated tests specifically for castling to expedite the development and ensure robustness.

Next Step

1. Online Play Implementation

Action Items:

- Design and develop network code to allow for online matches.
- Implement a matchmaking system or lobby where players can connect.
- Ensure secure and stable connections between players for a consistent gaming experience.

Goals: Enable players to compete against each other remotely, expanding the game's reach and increasing its competitive appeal.

2. AI Chess Assistant

Action Items:

- Provide helpful tips and strategies
- Aid beginner level users in understanding concepts of the game.

Goals: To help the player in making the right moves and become a better player.

2.Complete Castling Functionality

Action Items:

- Finalize the development of the castling move logic.
- Test all castling conditions thoroughly, including those involving check, obstruction, and whether the involved pieces have moved.
- Integrate the completed castling feature into the current build.
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Goals: Ensure that players can execute castling, adding depth to the game's strategy.

3.Pawn Promotion Feature

Action Items:

- Program the logic for pawn promotion, giving players the option to replace a pawn that reaches the opposite side of the board.
- Design a user-friendly interface that allows players to choose between a queen, rook, bishop, or knight during promotion.
- Conduct usability testing to ensure the promotion process is intuitive and error-free.

Goals: Introduce the full spectrum of chess rules to provide an authentic and comprehensive chess experience.