Department of Computer Science and Engineering

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Project Documentation

Week 8: Move animation highlighting, reset & end game text

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The updated code for the Chess engine includes several new features that enhance the overall user experience. The new features include square highlighting, move animation, reset, and end game text functionalities. These features make the gameplay more intuitive and visually appealing, and the reset and end game text functionalities provide added convenience to the user. With these updates, the Chess engine is now a more complete and polished product that is sure to impress Chess enthusiasts of all skill levels. In this documentation, we will provide a detailed explanation of each new feature and how to use it.

The updated code for the Chess Engine includes the following new features:

1. **Square highlighting:** The function "highlightSquares" highlights the selected square and all the valid moves from that square in blue and yellow colors respectively. This feature helps the user to identify the moves possible for a selected piece.
2. **Move animation:** The function "animateMove" animates the movement of a piece from its initial square to its destination square. The animation includes erasing the piece from its original location, drawing the captured piece (if any) in the destination square, and then drawing the moved piece in its new location. This feature adds a visual element to the game and enhances the user experience.
3. **Reset and end game text:** The function "drawText" adds the ability to display text on the screen. This can be used to display messages such as "Game Over" or "Checkmate" when the game ends, or to display a message asking the user if they want to reset the game.

Functions:

1. **highlightSquares(screen, gs, validMoves, sqSelected)**: This function takes in the following parameters:
   - screen: the Pygame display screen
   - gs: the GameState object representing the current state of the game
   - validMoves: a list of all valid moves from the currently selected square
   - sqSelected: the currently selected square

This function highlights the selected square in blue color and all the valid moves from that square in yellow color.

2. **animateMove(move, screen, board, clock)**: This function takes in the following parameters:

- move: the Move object representing the move to be animated
- screen: the Pygame display screen
- board: the current board state
- clock: the Pygame clock object

This function animates the movement of a piece from its initial square to its destination square. The animation includes erasing the piece from its original location, drawing the captured piece (if any) in the destination square, and then drawing the moved piece in its new location.

3. **drawText(screen, text)**: This function takes in the following parameters:

- screen: the Pygame display screen
- text: the text to be displayed

This function displays the given text in the center of the screen in gray color with a black outline.