Introduction

The basic purpose of Sprint 3 is to incorporate the power-up system and piece specific power-up rules into the existing standard chess implementation. Sprint 3 will also finish the implementation of the standard chess, incorporating check/checkmate and end game functionality that was not completed during Sprint 2.

Requirement Artifacts

- During initialization, the program should also randomly distribute 'power-up tokens' across the board.
- Board positions that are not assigned power-up tokens should be initialized with a randomized counter to be used for future assignment of power-up tokens.
- If a piece is moved onto a position that contains a power-up token, that token should be removed from the position and assigned to the piece.
- When a token is assigned to a piece, the position should be assigned a new randomized counter.
- Ifa piece is in possession of a power-up token, its valid moves list should be determined based on the expanded 'powered-up' rule set created for that piece type.
- When a piece that is in possession of a power-up token is moved, its power-up token should be removed, regardless of where it is moved.
- After a piece is moved, all positions that do not have a power-up token currently assigned should decrement their counter value to track the number of turns remaining until they acquire a token.
- When a counter reaches zero, the position that counter belongs to should be assigned a power-up token.
- If a counter reaches zero on an occupied position, the token should be assigned to the position, but not to the occupying piece.
- The valid moves determination should include the restriction that no move can result in the moving player being in check. If the player is in check before their move, the only valid moves are those moves that take the player out of check. If the player is not in check, the only valid moves are those that do not put the player into check.
- When a piece is selected, the program should handle the effects of that move, such as capturing an opponent's piece, and determining if the opponent has been placed into check or checkmate.

- When a player is determined to be in checkmate, the program should end the game and indicate which player is the winner.