

Chess Program

Functional requirements:

1. All chess functionality
 - a. Moving pieces
 - b. Capturing pieces
 - c. Ending game with mate
 - d. Stalemate
 - e. Castling
 - f. Promotion
 - g. En passant
2. Able to play a two player game on the same computer
3. Able to play against the computer - Single Player
4. An interactive GUI



Non-functional requirements:

5. Menu Bar with options
 - a. Reset
 - b. New Game
 - c. Save
 - d. Load
 - e. Undo
 - f. Adjust difficulty
 - g. Change language
 - h. Shortcut commands
6. Stockfish integration
 - a. <https://github.com/Niflheim/Stockfish-Java>
 - b. <https://chess.stackexchange.com/questions/15704/what-is-the-optimal-way-to-use-stockfish-programmatically/15707#15707>
 - c. Compile fen string of board
 - d. Move translation
 - i. internal
 - ii. external 1. e4 2. Nxg7
7. Multiplayer across two devices
8. Possible move highlighting
9. Move animations
10. Time control
11. Make PGN (Save game)
12. Flip board
13. Sound effects
 - a. Pieces make noise when they move
 - b. Victory/Stalemate music

The non-functional requirements are not necessarily mandatory, they are added if we are able and have time. The main priority is the functional requirements.