Functional and non-functional requirements

Product purpose

The team has been tasked to program an chess application. The team will do it's best to create a fully functional chess application with all rules. The goal is to provide a chess aplication which will function as a traning ground, but also bring hours of joy and entertainment for chess enthusiast, newcomers and experts alike.

Functional requirements

- A player should be able to choose wether to play black or white
- The system should have a visible chess board with chess pieces which the player can move
- The system should calculate a player score based on performance during a chess game and display it
- System should validate player moves according to chess rules
- A player should be able to move chess pieces according to chess rules
- A player can select a chess piece by clicking it
- A player may choose another chess piece bly clicking on it
- A selected game piece must belong to the active player
- The player moves a piece by clicking and dragging it to desired tile
- A player should be able to forfeit a game at any point
- A game is ended immediately a player forfeits
- A confirmation window should pop up when a player forfeits
- The system should let the player play against another player locally
- A player should be able to play a computer
- A player should be able to choose difficulty against computer

- A player should be able to undo moves on easy mode against computer
- The system should highlight possible moves for a chess piece when selected on easy mode against computer
- A player should be able to undo up to 3 moves against computer
- The gameboard will be reverted to the previous state when a move is undone
- A player should be able to knock out an enemy chess piece by doing a legal move onto a tile with an enemy chess piece
- The captured pieces should be displayed in a box next to the chess board

Non-functional requirements

- The application should be executable on most mainstream OS