

RavN Chess Training Software

User Manual

Chess is a two player board game which is played in alternating turns by the two players. In build (1.0) of the RavN chess training software we have implemented a locally running chess simulation that is interfaced with using a GUI.

Future builds will include the functionalities of saving games, loading games, and creating tangent lines within save games.

Launching RavN

To launch the RavN chess training software, the user should navigate to the RavN file folder, locate the RavN.exe application file, and double click the file. This should cause a GUI of a chess board with an action bar below to display on the screen.

Interacting with the RavN GUI

The user can interact with the RavN GUI in one of two ways, by making moves on the chessboard, or undoing the most recent move made by clicking on the undo button. To make a move on the chessboard, click on a piece you want to move and a square that it can legally go to.

Legal Move Rules:

- The piece must belong to the player whose turn it is in order for it to be able to move. Moves that do not conform to this will not be permitted by RavN. Player move is indicated by the text box on the lower left.
- Players continue to make moves until a move is played that threatens the capture of the enemy king next turn and no moves can be made by the opposing side to stop the capture of the king. This is called checkmate and will result in a dialog box popping up that says one side is in checkmate.
- The game has ended once checkmate has happened and the application should be closed. Further move actions or undo-move actions will not be permitted by the software.

Undo a move:

If a player does not like their most recent move, they can click on the “undo move” button in the lower right corner of the screen. Doing so will rewind the most recent move made. Any further clicks of this button will do nothing unless another move is made.

The fast forward button to the right is clickable but it does not have any functionality attached to it as of yet (this will be added in further builds as the methodology underneath it is unstable and causes issues at the moment). Any clicks of this button will not do anything.

Piece Motion Rules (How to play Chess)

It is assumed that the user understands how the pieces move but I will include a brief refresher:

- Both pawns and pieces cannot move onto squares occupied by the same colored pawns or pieces.
- The pawns move forward one space at a time except for the first time they move when they can move two squares. The pawns are unique because they can capture enemy pieces on the adjacent squares in front of them that are the same color as the square the pawn is on. As a result the pawn can be blocked by a piece of the opposite color that rests in front. Also if a pawn reaches all the way across the board to a back rank you can promote it to any piece which isn't the king or a pawn. For the purposes of this version of our program we automatically promote the pawn to a queen, even though there are some situations where promoting to a knight, bishop or rook is more beneficial.
- There are five types of pieces in chess with the most important being the king. All the pieces move and capture on the same squares and cannot move over other pieces, except for the knight.
- As mentioned earlier if your king can't escape capture then you lose the game. The king can move one square in any direction and can't make a move that would allow it to be captured next turn. Similarly you cannot move a piece or a pawn somewhere that would allow the king to be taken on the next move. The kings start on opposite sides of the e-file which is the fifth column over from the left side of the board because e is the fifth letter in the alphabet.
- The rooks start on opposite sides of the a-file and h-file in the corners of the board. They move horizontally and vertically along the the rows and the columns as far as they can get before hitting the side of the board, a friendly piece or capture an enemy piece. The bishops are similar to the rooks with the only difference being that they move along the diagonals instead of the rows and columns.
- Each player starts with a pair of bishops on the c-file and f-file. The queens start opposing each other on the d-file and combine the movement abilities of the rooks and bishops. They can move as far as the player wants unhindered except for the edges of the board, a friendly piece or capturing an enemy piece.

- The knight is a special piece because it can move over friendly and enemy pieces in order to reach its destination square. The knight moves in an L shaped manner, two squares over in one direction and one square in the other direction. The knights are the horse icons that start on the b-file and g-file.
- There are two special moves that are noteworthy in chess. Castling and En Passant. Castling is the only move which moves two pieces at once and is legal when all the squares between an unmoved king and rook are empty. The king is moved two spaces towards the side of the board and the rook is placed on the inside of the board next to the king.
- We have not implemented En Passant yet, but it consists of moving a pawn onto a square it can usually attack behind a pawn that just moved two squares to capture the enemy pawn.

Contact Us

RavN is an ongoing project that will evolve based on feedback we receive from users. Contact the developer team at alelia40@gmail.com or jpp85@case.edu to leave feedback and suggestions.