

Project 2

Really Dumb Chess Program

This project allows two people to play chess. It keeps track of the pieces on the board, allows moves in turn, and checks for legal or illegal moves.

The requirements are as follows:

1. The board is 8x8. It is displayed at startup and after each move.
2. This is a console application (no GUI).
3. Display:
 - a. You need an 8x8 board. The easiest thing to program, and probably to visualize is a grid of boxes formed by vertical and horizontal lines. (“|” and “-”)
 - b. You need some way of labeling the pieces. I recommend the following for display: k,q,b,n,r,p for the black pieces, and the same letters upper case for white. Note that the knight is “n”. If you choose a different representation, let the tester know.
4. The board is labeled as follows: From where WHITE sits, the ranks (rows) are labeled 1 through 8 (bottom to top). The files (columns) are labeled A through H (left to right).
 - a. For example, the white has rooks (castles) on A1 and H1, and the white king is on E1. The black king is on E8.
 - b. It would be nice to have the labels on the board you display, but you decide.
 - c. If you choose a different labeling scheme, make sure the tester knows.
5. Commands are “source – destination”, or something similar, using the coordinates as follows: “E2 – E4”. Decide on whether you want spaces, and whether you want upper or lower case letters, etc.
6. At the beginning of each move, prompt the user with “White’s move:” or “Black’s move:”
7. After each move, show the changed board.
8. Do not allow illegal moves.
9. Detect and handle captures of pieces.
10. Handle “check” in a simple way:
 - a. Report if a king is in check (is in danger of being captured.) Report it no matter whose turn it is. For example, if Black moves to put White in check, report it at the beginning of White’s turn. But if White’s king is in check at the end of White’s turn, report that White is in check at the beginning of Black’s turn!
 - b. Do not prevent moves that result in one’s own king being in check. (In real chess, that is illegal, but this isn’t real chess.)
 - c. Do not detect checkmate.

11. This is a dumb chess program:

- a. Do not try to detect stalemate.
- b. Handle pawn promotion, but Pawns always promote to queens.
- c. Do not worry about *en passant* captures by pawns. If you don't know what they are, that is one reason not to worry about them.
- d. Do not allow castling.

12. The game is over when one or the other king gets captured.

Example:

8		r		n		b		q		k		b		n		r	

7		p		p		p		p		p		p		p		p	

6																	

5																	

4																	

3																	

2		P		P		P		P		P		P		P		P	

1		R		N		B		Q		K		B		N		R	

		A		B		C		D		E		F		G		H	