Andy Xu

Name:

The name of my term project will be **Two Player Chess**. I would be coding a python-based chess game with mechanics such as en passant, castling, promotion, etc.

Similar Projects:

A similar project that I've seen is Chess AI. If time permits, I will attempt a chess AI, but I'm not too sure of the difficulty. I've also just seen 2 player Chess online.

Mechanics:

The Chess Projects that I've seen online included promotion to queens, castling privileges, and en passant. I'll probably create object-oriented classes that include lists of pieces in its line of sight, which are the places that it can move to. Some chess projects also had a switching sides of the board mechanic every turn that I hope I can implement.

Organization:

The finalized project will be organized into a folder, with files for every image of the pieces. The different functions will be organized in one main python file, with a board creator and piece generator. There will also be classes for the pieces and a board to operate the pieces on.

Possible challenges:

The hardest parts of this project are definitely the castling privilege and pieces being pinned to the king. I will probably have to implement an isLegal function and a special case for castling. Every time the move is made, if it is not legal, it will check and backtrack the move as necessary.

TP 1 goals:

I will try to complete my pieces movability and the turns by TP1, and then implement castling and en passant by TP2. By TP3 I want everything working so that I have a week to debug and find possible flaws in the code.

Ways to backup project:

I have a google drive folder that I am putting the backups of my files. I will be making the backups every 2 days or so or after each method is completed. I will also be naming them based on the day.

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My Drive > CS TP Backups ▾

Folders

📁 termproject
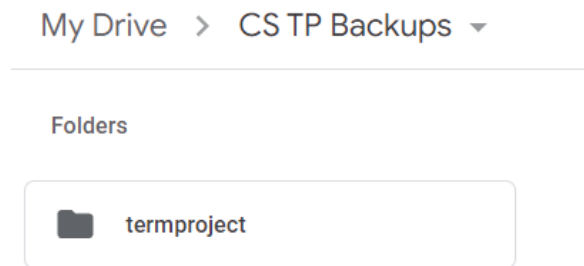
I will not be using any modules.

TP1 Update:

I have made 0 changes to my project ideas.

TP2 Update:

I have made some changes to the code. Firstly, I am not going to switch the sides of the board, as that was not in a majority of chess projects and chess.com (who I am modeling from).

In terms of work, I have added in check, checkmate, and castling. I have also added in promotions. I also added in En Passant. I also added in check mechanics for pawn, bishop, queen, rook, and knight. I also decided to add a piece counter, meaning I would see the advantage of pieces on the board.

Another design I added was a moves counter, which would count the number of moves and report them at the end of the game. I also added a turn display to show who's turn it was, as well as an evaluation bar (super scuffed but it shows advantage in terms of pieces on the board based on points: knights and bishops are 3, queen is 8, rook is 5, and pawn is 1).

TP3 Update:

Some new features I have added was a menu screen, victory screens, and a stalemate screen. I also added undo move by using a list of moves and the board's information at the move's point.