

CS246 Fall 2021 Project Demo

When the program starts, there will be a prompt that asks:

Enable fancy display?(y/n)

Type n and it will display a chessboard with letters representing pieces. If y, then it will display a chessboard with the Unicode characters for chess pieces displayed. [note: if the terminal does not support Unicode, type n]

There are two modes to this program: setup and game mode.

In game mode, the input is as follows:

[g/game] [human/computer[1-3]] [human/computer[1-3]]

To avoid typing, you can type g.

When you're in game mode, if it's the human's turn, you type in:

[m/move] "start square" "end square" (Ex. move e2 e4)

If it's the computer's turn, simply type move or m.

In setup mode, you simply type setup or s for short. If the game is running and you try to move a piece you will get an error message. [Look at the error messages]

When in setup mode, there are a few following commands:

The + command adds a piece. The command is as follows:

+ [piece] [square]

The - command removes a piece. The command is as follows:

- [square]

The = command sets whose player it is to move.

= [white/black]

The done / d command leaves setup mode.

If done is typed without typing =, the default is white's turn to move.

When any of the commands are typed, both the terminal and graphic display are updated at the same time.

Error Messages

If it reads none of these commands.

```
Invalid Command
```

If it is not human or computer[1-3], it will prompt this message:

```
Invalid Command - Must be either human or computer[1-3]
```

If the game is not running and you try to move a piece you will get the following message.

```
Game is currently not running.
```

If you type in a square not on the board, it will prompt.

```
Square out of bounds. Try again.
```

If you type in an illegal move, it will not change the board and prompt:

```
No move detected. Try again.
```

If the game is running and you try to enter setup mode you will get the following message.

```
Game is currently running.
```

If you try to input another colour instead of white or black when in setup mode = , you get the prompt:

```
Invalid colour
```

If you try to exit an setup mode with an invalid board you get the following error.

```
Invalid board
```

Input Files

enpassant.in - tests invalid en passant move where en passant condition is not met, since the en passant move is not performed after moving the white pawn up 2 squares. (many moves later)

enpassant2.in - tests a valid en passant move

fastestStalemate.in - performs the fastest stalemate possible in a chess game

twoMoveCheckmate.in - performs checkmate

castlingCheck.in - performs castling for white and black side. Queen side castle for black and king side castle for white.

all_pieces_stalemate.in - runs a more complex human vs human game that ends in stalemate (also uses fancy display) (fun fact, no piece is captured)

level_two_many_moves_test.in - runs Level 2 vs Level 2 computer game

pawnPromotionComputer.in - computer performs pawn promotion test

fancyDisplay.in - uses fancy display to run 4 separate games (game 2 black is winner, game 4 is stalemate)

test_level_1.in - runs Level 1 vs Level 1 computer game

test_level_3.in - runs Level 3 vs Level 3 computer game

setupTest.in - enters setup mode and tries to exit it by testing all invalid boards (not exactly 2 kings, pawn on last row). Only exits on a valid board and the game is run.

setup_check.in - enters setup mode and tries to exit it by testing if any king is in check.