chepss document

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Abstract

this document is about our student project to implementing a simple board game like chess. the rules of game explained in the similar document in persian. the goal of project was to validating the game between two players outside. but we do so many better things. our project give a nice view of game board and performed actions by playesr, it let you to iterate between player actions, it can save and restore games, and may tiny features you have discover. ^_ ^

1 includes

we need three heder files to include. ¡stdio.h¿ for standard input output. ¡string.h¿ for some comparation. ¡sys/ioctl.h¿ and ¡unistd.h¿ for getting current size of terminal to a better view.

2 data structures

this section contains some data types as important as they are data structures of the game. the enums implemented by #defilne macro because they are so smaller than 4 bytes.

3 variables

in this section variables of the game are defined by using the data types lastly defined.

4 constants

in this section some constants defined for mapping data clearly. these are the symbols of pieces in the game.

5 utility

this section contains some simple functions for more convenience.

6 validation

this is your favorite section. the functions in this section will evaluate actions done by players. generally i think an action would be valid if it's legal (it means every players moves his own pieces and rules like that) and it's valid (it means the move is a valid for the type of moving piece), and it's safe (it means after the move done, player should not be checked). but this section is not just a validation because every single error that movement could throw is distinguished by different return codes. and even this returns code are develop friendly. thanks to MRC creative protocol that saves max return code of every single validation function.

7 game control

this section finally contains small functions doing big jobs! these whould genelly control the game.

8 main

at the end main function has just to call game controllers and make it play.

9 interaction

every players has to move respectively. startig form white player. the turn number and the player has to move will shown before every prompt. players could enter their move in format [piece][source][dist] or just [source][dist]. they can iterate between actions by goto command and entering the turn they want to go as prompred. they can save the game and then edit that manually by using save command and entering the file path. they can exit the game and this way they can restore any saved game by entering the file path. they can even quit game peacfully by using quit command. the board shown at the center of screen. at the right and left of board, dead pieces will shown. the table of performed moves will shown right of board and dead pieces according the terminal size. last move highlighted at the table and it's always vissible. and finally error messages handled for every single possible error.