Bedienungsanleitung

Mounir Darwish
Ahmad Mohammad
Seyedbehnam Mirhashemi

May 2021

Contents

1 Console

Below you will find the operating instructions for the console based game.

1.1 Start the Game

When starting the programm, a game human against human can be started by entering 1 and by entering 2 a game against the AI can be started. The next step is to enter a value for game timer in seconds of each player(first white than black). If the wish is a game without any timer, entering 0 will grant that. No further steps are necessary. Then the first move can be made directly. You can find out how to do this in Section 1.3.

1.2 The playing field

The playing field is structured like a normal chess playing field and alle the upper-case letters represent white pieces and the lower-case letters represent black pieces. although the letters stand for the following pieces:

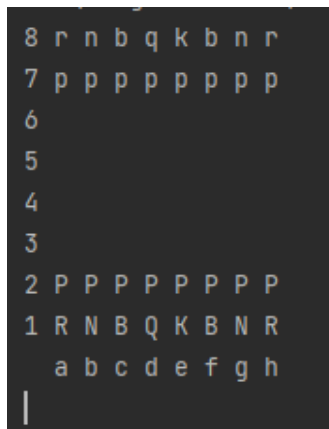|	
K: white king	k: black king
Q: white queen	q: black queen
R: white rook	r: black rook
K: white knight	k:black knight
B: white bishop	b:black bishop
P: white pawn	p: black pawn

Figure 1: Chess Board Cli

1.3 Make a move

Entering a move follows a strict syntax. The first step is to specify the field on which the figure that is to be moved stands. For the referencing of a field, the common chess designations a1 to h8 are used. The corresponding markings are available for this on the edge of the playing field. (see Figure 1). This is followed by a hyphen. Finally, there is an indication of the field to be moved to. A valid entry would be a2 - a4. An invalid entry would be a2 a4, since there is no hyphen here, or a7 - a9, since a9 is not a valid field. The move is always made for the player whose turn it is. After a successful move it changes automatically. If an input is syntactically invalid, this is signaled by the output "Invalid move!" and the move is not carried out. If an input contradicts the rules of chess, this is signaled by the output "Move not allowed!" and the move is not made. A valid entry is again confirmed to the player by outputting the corresponding entry with an exclamation mark in front of it.

1.4 How to see the beaten pieces

If you enter "beaten", a list of the pieces that have already been captured is displayed.

1.5 Check, checkmate, win, draw

The fact that a player is in check, has been checkmated or the game has ended in a draw or which player has won is indicated by appropriate outputs.

1.6 AI

The AI is black by default. So that the AI's moves can be better understood, they are output via the console like player moves.

1.7 Ending a game

To end any game, the programm can simply be closed.

1.8 Additional features

1.8.1 Chess clock

Each player can easily see the remaining time by entring "time" as input.

1.8.2 Undo & Redo

This feature in Cli and Gui can be used. By Cli when player enter undo as input, the last move will be reset and by entering redo set back the undid move.

2 GUI

In the following you will find the operating instructions for the GUI based game.

2.1 The main menu

When the application is started, the main menu appears. Here the user can choose a Normal or a LAN game.

Normal Game:
Here you can start a new game against human by pressing the button human and against AI by pressing the button AI. You can read more about this under Abschnitt 2.2. The settings tab shows the settings. The settings are explained further under Abschnitt 2.3.
the - button minimize the application and The x button closes the application.

LAN Game:
Here can a network game started. One player must act as server the other as client. ou can read more about this underAbschnitt 2.2.

2.2 Start the game

Normal Game:
To start a new game, you must first select an opponent respectively the game mode. You can create a game human against human by choosing the "human" button or a game against the AI by choosing a "AI" button. In Human against Human mode player must choose a time(choose none whe you wish to player without timer), then click on start game button.
If you want to play a game against the AI, you must also choose a color by clicking on white or black button. Then must choose a time in seconds for each player(choose none whe you wish to play without timer), Afterwards click on start game button.

LAN Game:
To start a new game, a player choose to be host and act as a server and another as a client and must join the host.
Host must choose the color and the undo, redo option and the timer for both player(when Yes then must enter a number for the timer in seconds).Then the game wait for the join request from the other player. In join game mode user must enter the server ip address and the port number. Afterwards the game will be started.

2.3 Settings

In the game window can from the settings tab "Rotate Field" , "Reselect Piece", "Check Status Notification" and "Show Highlighting" be choosed.
It is also possible through the "Game" tab to go back to the Main Screen.

2.4 The Field

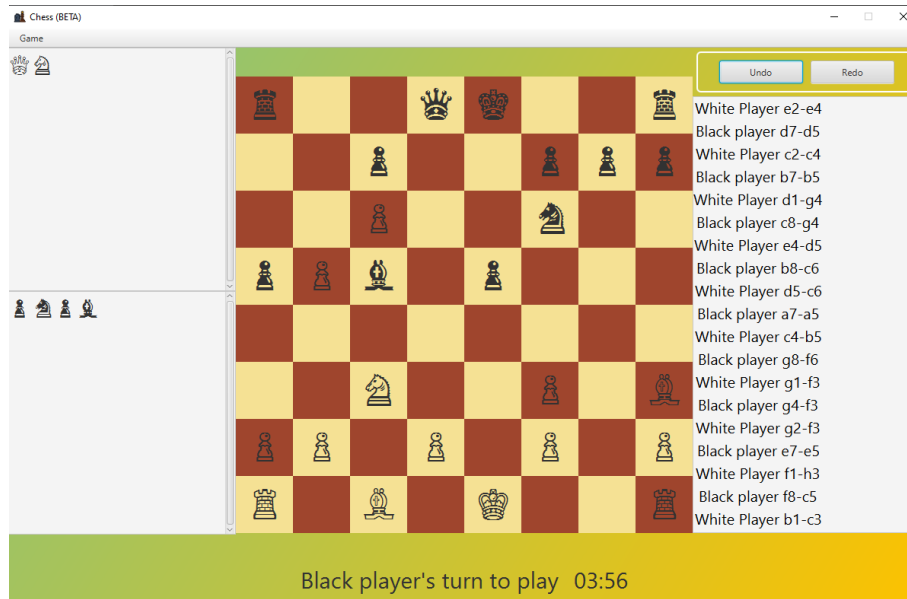The playing field can be seen in Figure 2.

Figure 2: Chess Board GUI

On the left side is a field where the beaten figures are listed. On the right side is a history of the moves made. Below the field, notifications appear, such as which player's turn it is, whether a player is in check or which player has won and also the chess clock shows the remaining time for each player.

2.5 Make a move

To move a figure you first have to select the figure you want to move with a mouse click. Then all the fields to which you can move the figure to (all the possible moves) are highlighted graphically. You can turn this off in the settings. Now complete the move by clicking on one of the highlighted fields. If you click again on the already selected figure, the selection is removed and you can choose a figure again. You can also turn this off in the settings.

2.6 Check, checkmate, win, draw

The fact that a player is in check, has been checkmated or the game has ended in a draw or which player has won will be shown with the proper notification at the bottom of the board. Note that if the timer of a player is "0" (for example: White Player's Time is out), the player has lost the game.

2.7 AI

The AI can be white or black.

2.8 Ending a game

To end any game, the programm can simply be closed by pressing x button.

2.9 Additional features

In this project chess clock and undo & redo are the additional features.

2.9.1 Chess clock

At the start menu a timer for each player can be choosed through entering a value (in seconds) in the text box. Entering 0 sets a game without chess clock. Every player can play while there is time left. When the timer is 0 then the player has lost the game.

2.9.2 Undo & Redo

In Gui there is Undo & Redo Buttons, which will reset and redo the move.