



TCP2201 - OOAD
TRIMESTER 1 - 2310, 2023/2024

Talabia Chess Project

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Lecture Section: TC2L

Tutorial Section: TT6L

Contents

1 Compile and Run Instructions.....	3
1.1 Compilation Instruction.....	3
1.2 Execution.....	3
2 UML Class Diagram.....	5
3 Use Case Diagram.....	6
4 Sequence Diagram.....	7
4.1 Start Game.....	7
4.2 New Game.....	7
4.3 Load Game.....	8
4.4 Exit Game.....	8
4.5 Move Piece.....	8
4.6 Capture Piece.....	9
4.7 Win Game.....	9
5 User Documentation.....	10
5.1 Introduction.....	10
5.1.1 Purpose.....	10
5.1.2 Scope.....	10
5.1.3 System Requirements.....	10
5.2 Getting Started.....	11
5.2.1 Starting the Game.....	11
5.2.2 Game Interface.....	11
5.2.3 Rules of the Game.....	13
5.3 Playing the Game.....	13
5.3.1 Making Moves.....	13
5.3.2 Ending a Game.....	14
5.3.3 Starting a New Game.....	14
5.3.4 Save and Load.....	15

1 Compile and Run Instructions

1.1 Compilation Instruction

To compile and build the program into an executable program:

1. Open a Command Prompt (Windows) or Terminal (macOS/Linux):

- On Windows, you can use Command Prompt or PowerShell.
- On macOS/Linux, you can use the Terminal.

2. Navigate to Your Project Directory:

Use the '`cd`' command to navigate to the directory where the Java source files are located. For example:

```
Java  
cd path/to/your/project
```

3. Compile Your Java Files:

Use the '`javac`' command to compile the Java source files. The main class should be located in '`Main.java`'. The compiled classes will be placed in the same directory. For example:

```
Java  
javac Main.java
```

1.2 Execution

1. Navigate to the Compiled Classes Directory:

Use the '`cd`' command to navigate to the directory where your compiled classes are located. In our case, the compiled classes should be located within the same directory as our project. For example:

```
Java  
cd path/to/your/project
```

2. Run Your Java Program:

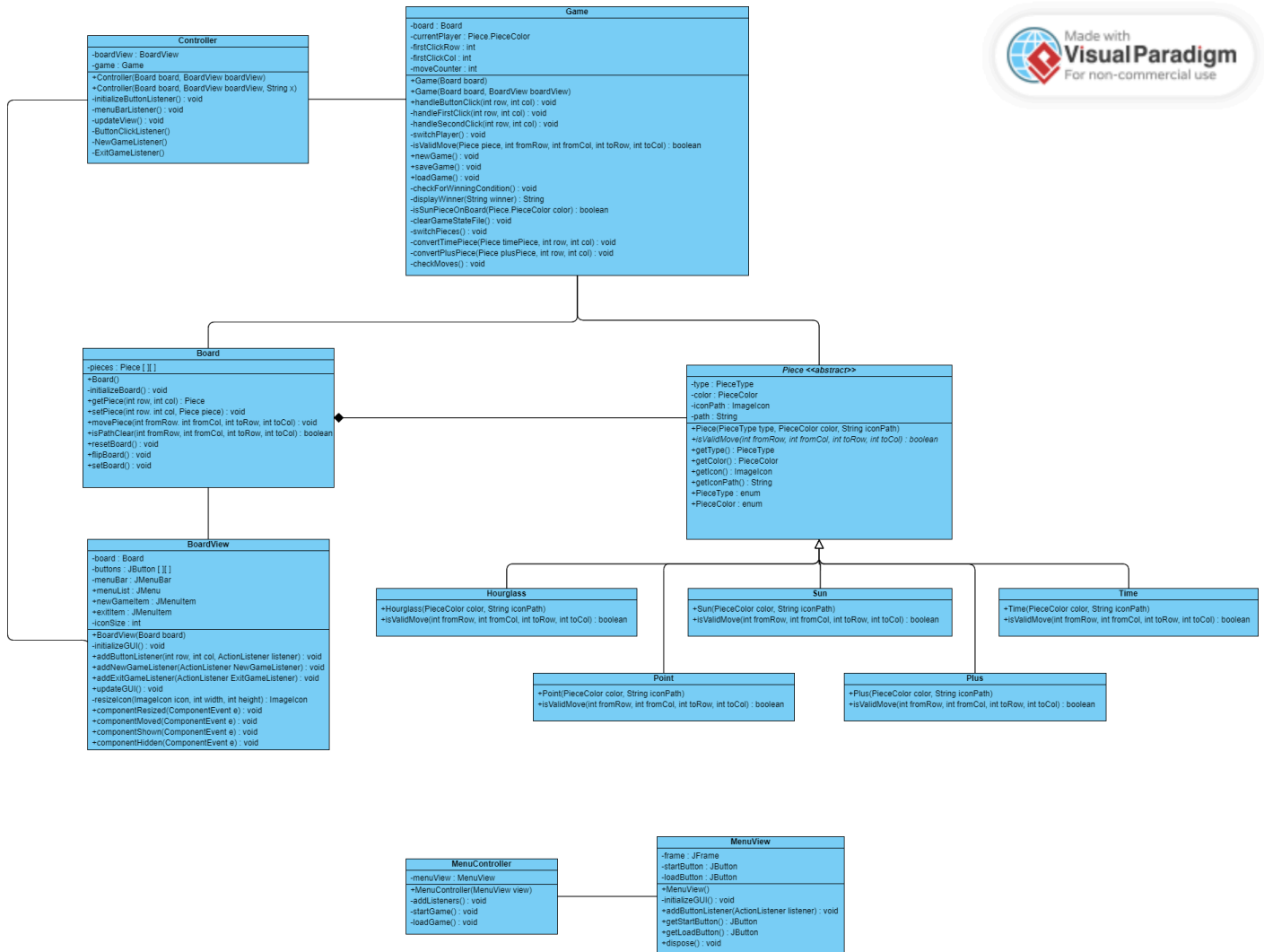
Use the 'java' command to run the Java program. Provide the name of the main class, which is 'Main'. For example:

Java

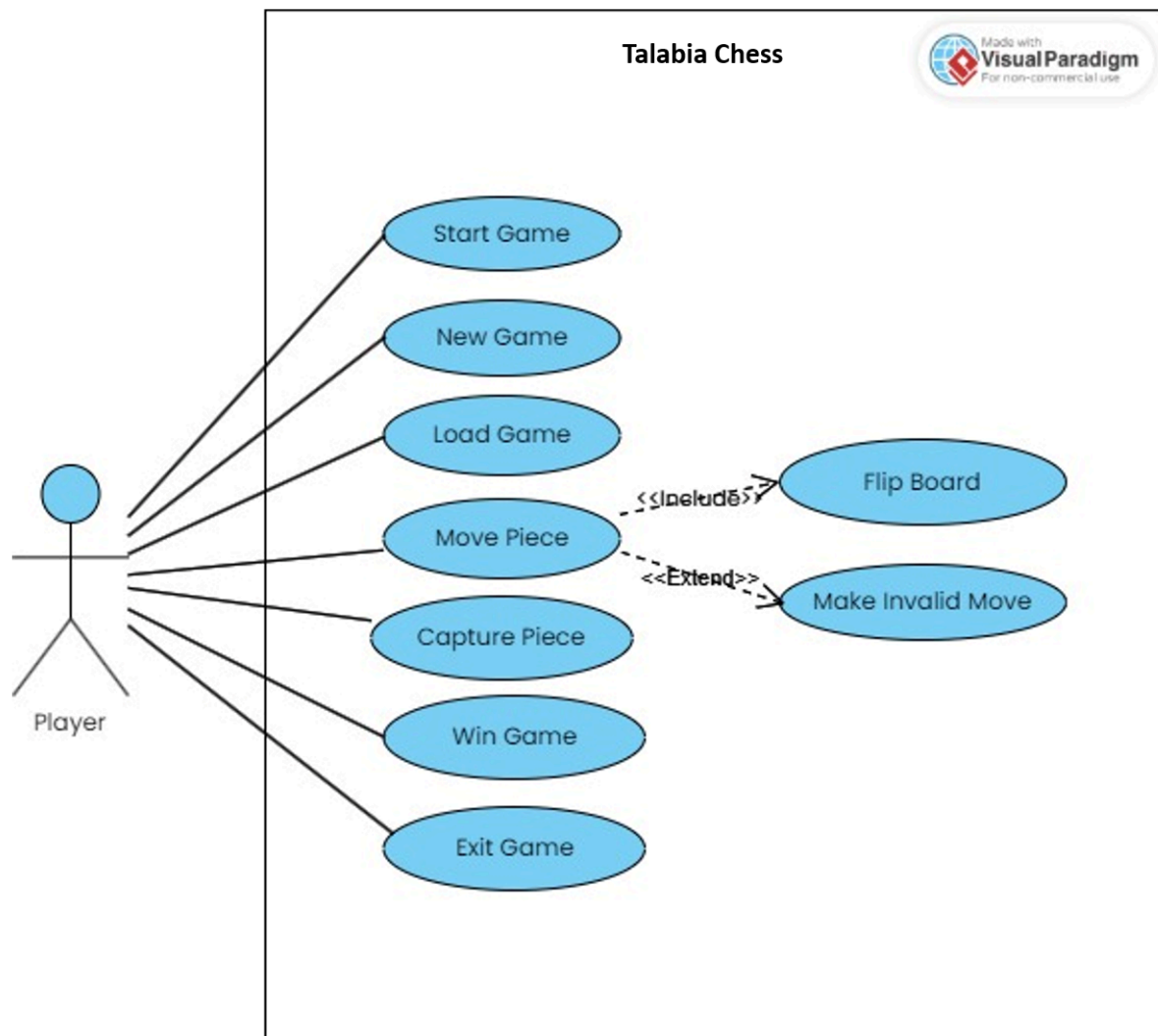
```
java Main
```

2 UML Class Diagram

For a clearer picture: [UML Class Diagram](#)

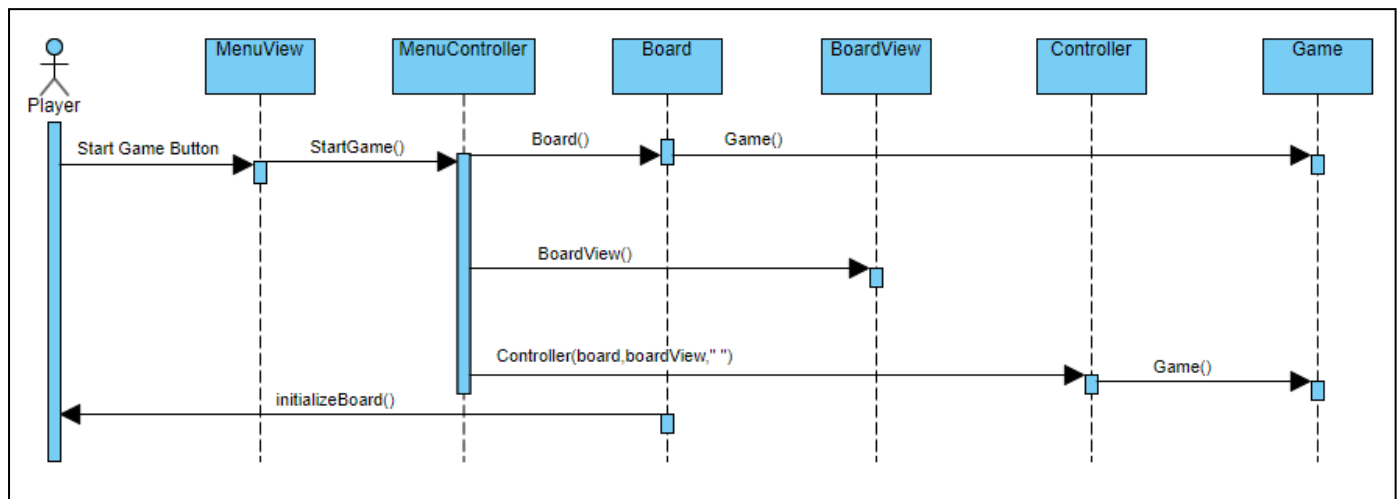


3 Use Case Diagram

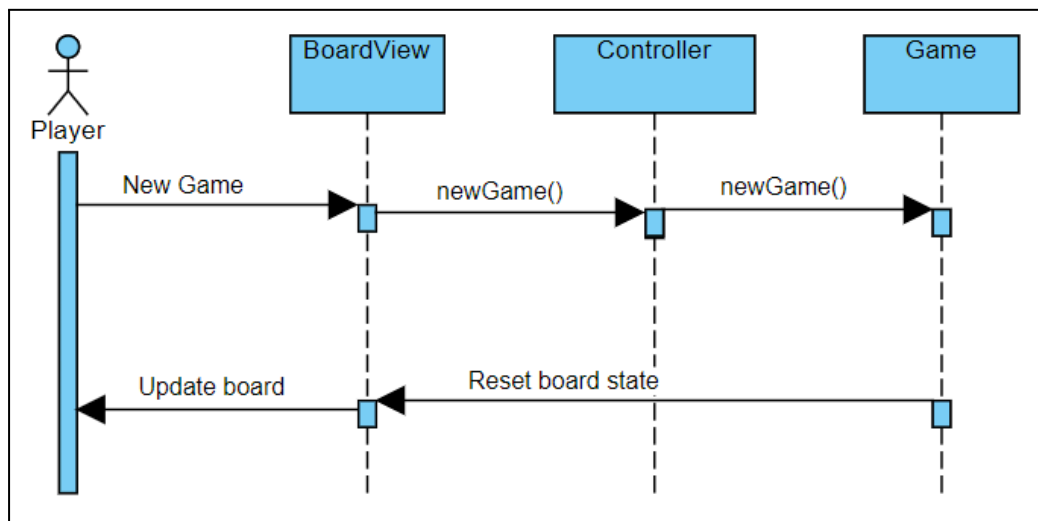


4 Sequence Diagram

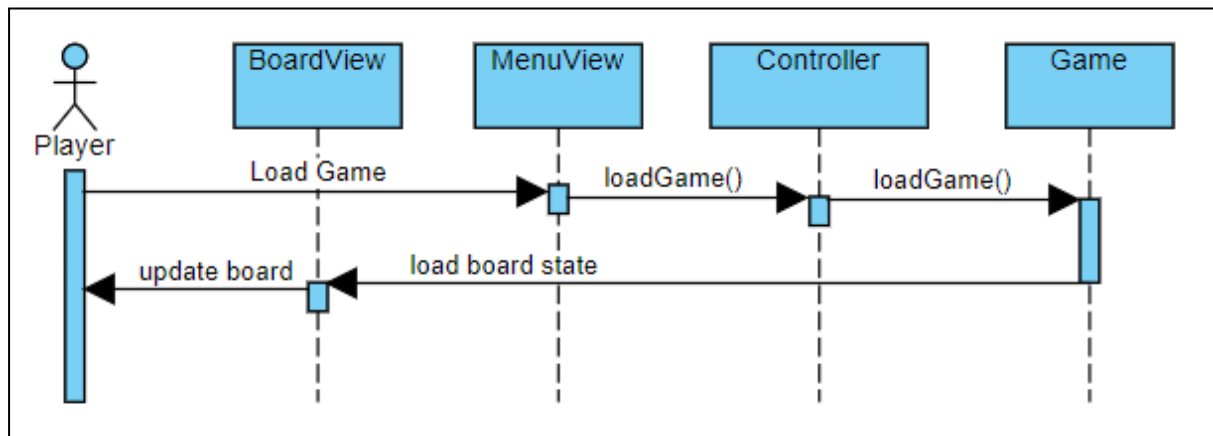
4.1 Start Game



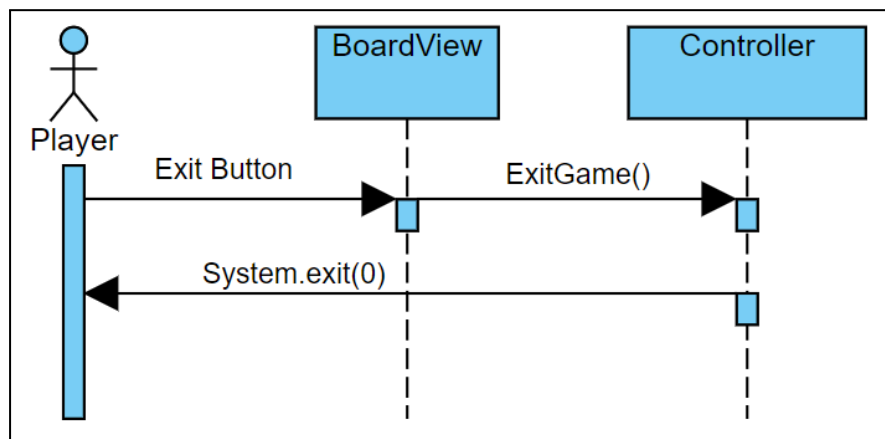
4.2 New Game



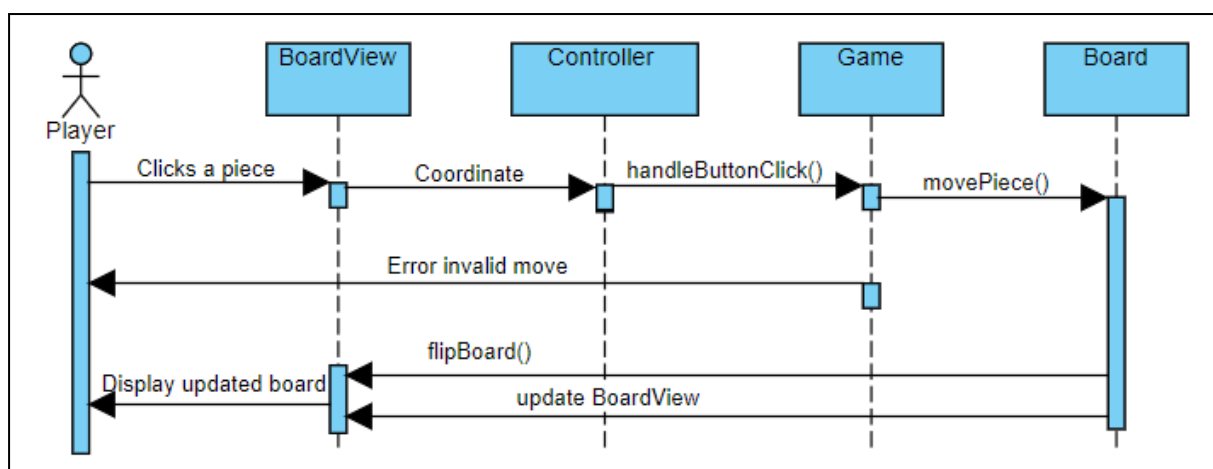
4.3 Load Game



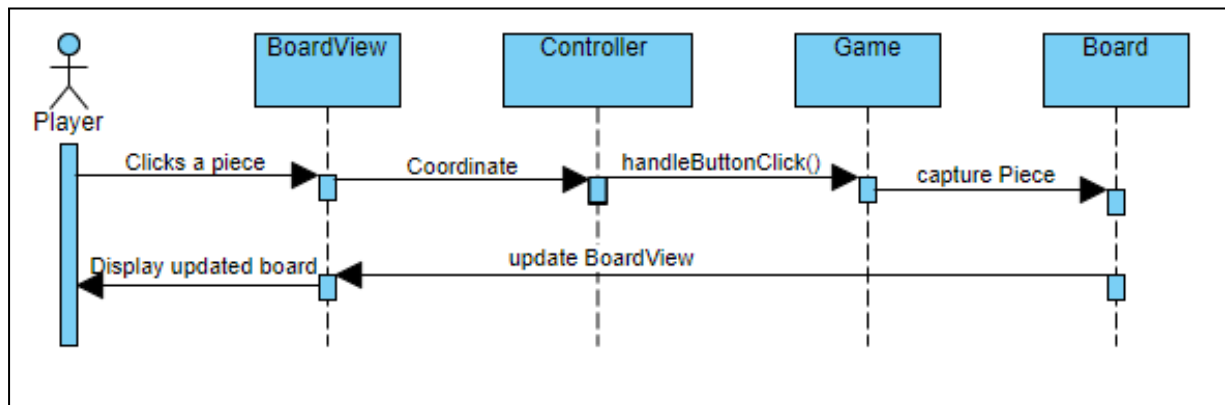
4.4 Exit Game



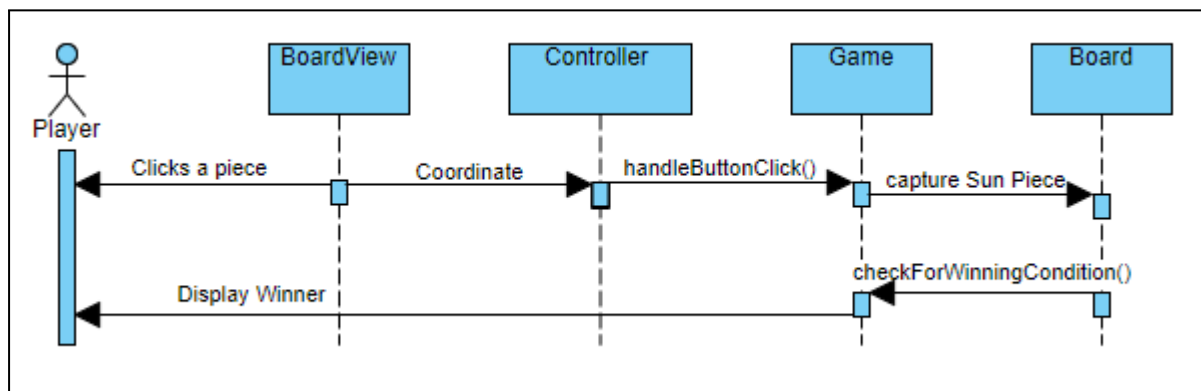
4.5 Move Piece



4.6 Capture Piece



4.7 Win Game



5 User Documentation

5.1 Introduction

5.1.1 Purpose

Talabia Chess is a custom chess simulation inspired from the standard chess game designed to provide an interactive and enjoyable experience for players. This user manual aims to guide users through the rules and gameplay of the chess game.

5.1.2 Scope

This manual covers the functionality of the Talabia Chess game, including starting the game, making moves, ending the game, save and load, and understanding the rules.

5.1.3 System Requirements

Ensure that your system meets the following requirements:

- Java Runtime Environment (JRE) installed
- Operating System: Windows, macOS, or Linux

5.2 Getting Started

5.2.1 Starting the Game

To start the game, follow the instructions provided in the first part of this document. Typically, this involves compiling the Java source code and running the executable.

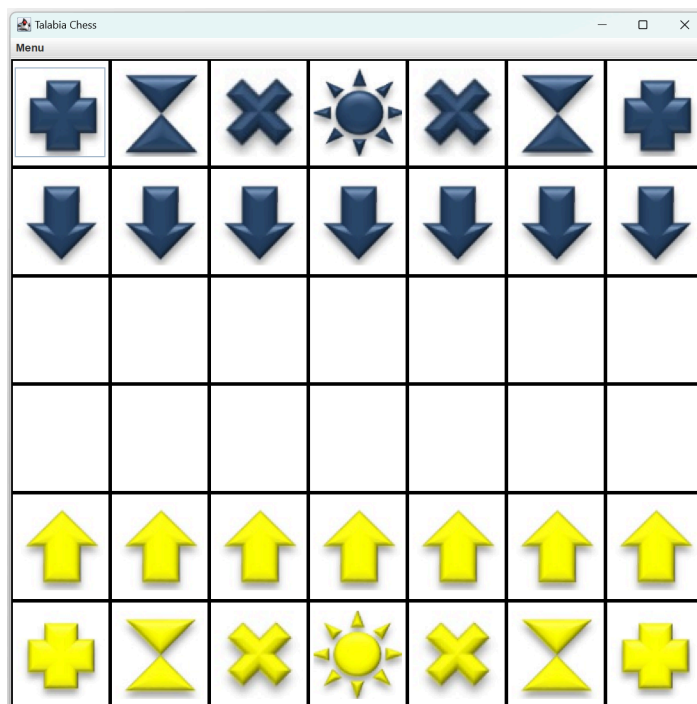
5.2.2 Game Interface

After running the game, user will be shown with this interface:








Users will be given two options, either to start a new game by clicking on the **"Start Game"** button, or to load a previously saved game by clicking on the **"Load Game"** button.

If the user choose to click on the **"Start Game"** button, then the Talabia Chess board together with its pieces will appear as shown below:



Talabia Chess is played on a 7x6 board, and the above layout is the initial position of the game pieces. Compared to a standard chess, Talabia Chess only has 5 pieces, which are:

	The Point piece can only move forward, 1 or 2 steps. If it reaches the end of the board, it turns around and starts heading back the other way. It cannot skip over other pieces.
	The Hourglass piece moves in a 3x2 L shape in any orientation (kind of like the knight in standard chess.) This is the only piece that can skip over other pieces.
	The Time piece can only move diagonally but can go any distance. It cannot skip over other pieces.
	The Plus piece can move horizontally and vertically only but can go any distance. It cannot skip over other pieces.
	The Sun piece can move only one step in any direction. The game ends when the Sun is captured by the other side.

5.2.3 Rules of the Game

The rules are pretty simple, which includes:

- The goal is to capture the opponent's Sun piece, the first player to do that will be declared as the winner.
- By default, the yellow side always moves first.
- None of the pieces are allowed to skip over other pieces except for the Hourglass piece.
- After two turns, counting one yellow move and one blue move as one turn, all Time pieces will turn into Plus pieces, and all Plus pieces will turn into Time pieces. This makes Talabia chess different from other chess games because the pieces will transform like that.

5.3 Playing the Game

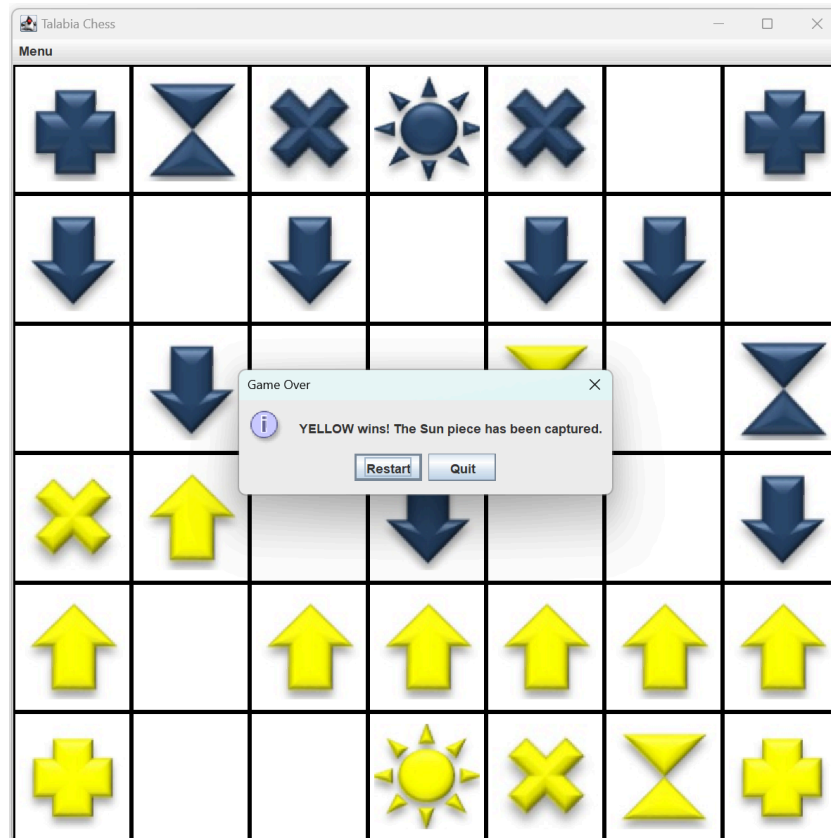
5.3.1 Making Moves

A valid move should include a **First Click** and a **Second Click**:

- **First Click:**
To make a move, first the player needs to pick on which piece to move by clicking on the piece itself.
 - If the player clicks on an empty box, or maybe on an opponent's piece, a message saying "Invalid click. Please select a valid piece." will show up indicating an invalid action.
- **Second Click:**
After that, the player needs to click on the box which the player wants to move the piece to, it can be either an empty box, or an opponent's piece, as long as it is within the allowed range for each piece.
 - If the player clicks on a box outside of the allowed range, then a message saying "Invalid move! Please select a valid target." will be displayed.
 - If the player clicks on the player's own piece, then a message saying "Invalid move! Cannot capture your own piece." will be displayed.
 - If the player clicks on that same piece again (the piece that the player clicked on the first click), a message saying "Cancelled selection." will be displayed, indicating that the movement is cancelled.

5.3.2 Ending a Game

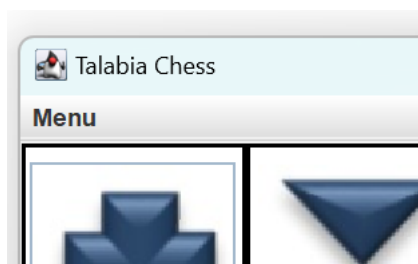
The game ends when the opponent's Sun piece has been captured by a player. A pop-up window will show up, declaring the winner. Players then have the option either to start a new game by clicking on the “**Restart**” button, or to quit the game by clicking on the “**Quit**” button, as shown below:



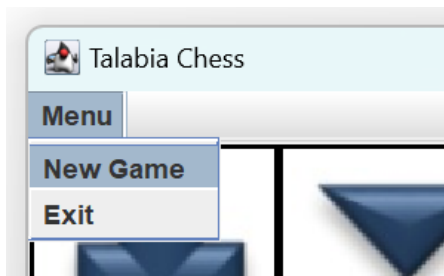
5.3.3 Starting a New Game

Players can actually start a new game after a game has commenced:

- 1) Click on the “**Menu**” button on the menu bar.



2) Click on “**New Game**”.



Players can also quit the game either by clicking on the '**Exit**' button in the drop-down menu accessed from the '**Menu**' button, or by simply clicking on the close button (X button) in the game window.

5.3.4 Save and Load

- **Save Game:**
The game automatically saves after each player's move, meaning that if somehow the game crashes, players can safely load the saved game and continue playing.
- **Load Game:**
To load a saved game, click on the “**Load Game**” button on the main menu, as shown below:



It will then load the saved game, which contains the previous piece's locations and also the player's turn.