Konobi game

Software Development Method Project

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Introduction

The **goal** of our project is to implement the **Konobi game** in Java, giving also the user the opportunity to choose between two interfaces: **console version** or **GUI version**

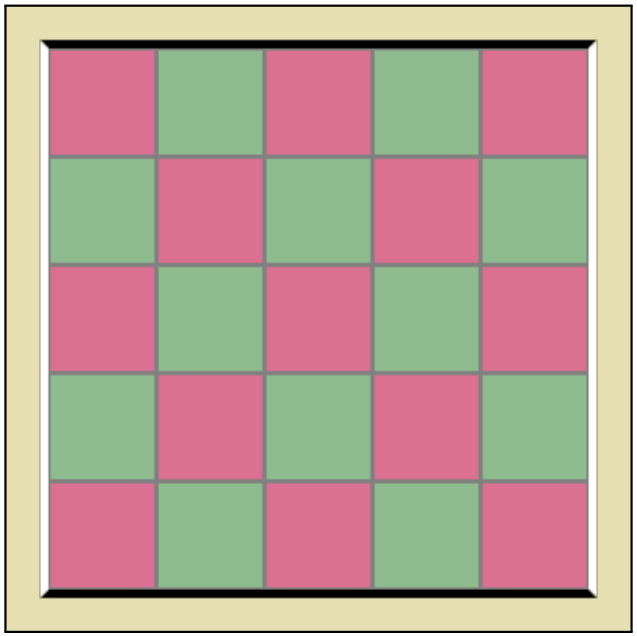
Tools

- IntelliJ;
- GitHub;
- Gradle: building;
- TravisCI: continuous integrations;
- JavaFX: ;
- Other?

Konobi

Konobi is a drawless connection game for two players: **Black** and **White**. It's played on the a square board, which is initially empty.

The top and bottom edges of the board are coloured black; the left and right edges are coloured white.



Konobi Rules

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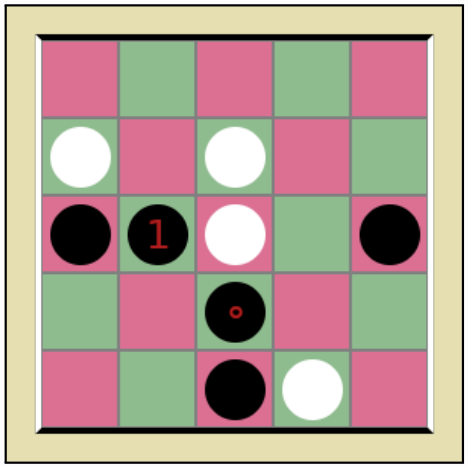
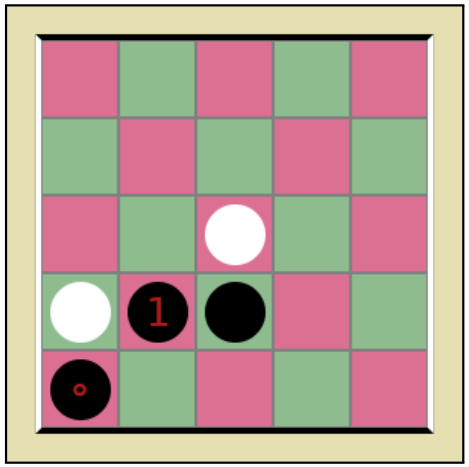
It's **illegal** to make a weak connection to a certain stone unless it's impossible to make a placement which is both strongly connected to that stone and not weakly connected to another.

Legal and Illegal Moves

Legal moves:





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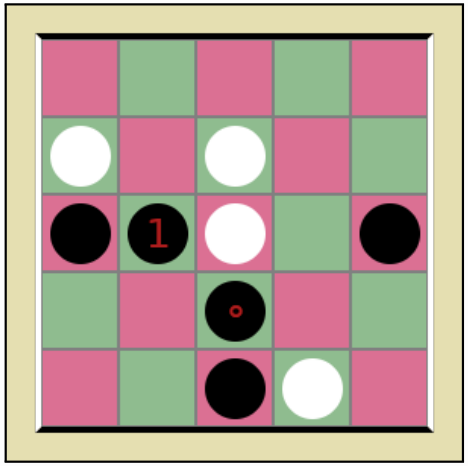
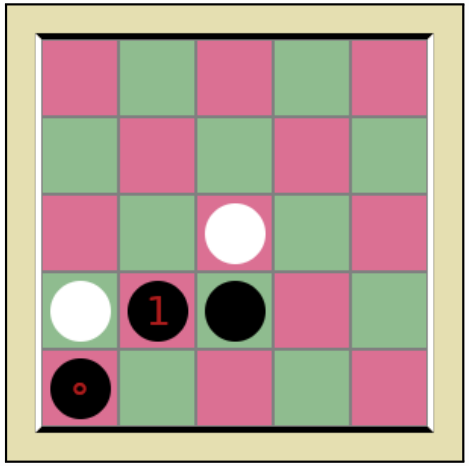
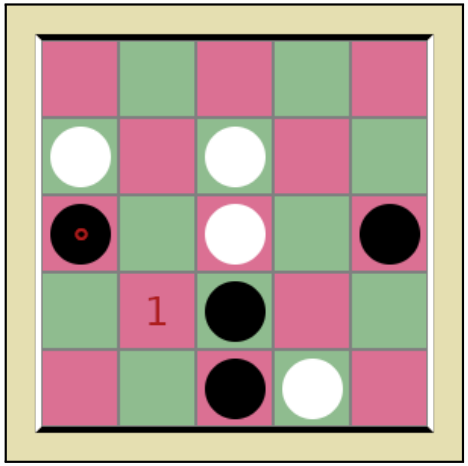
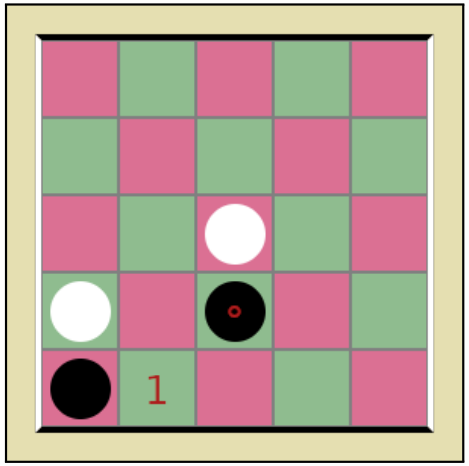




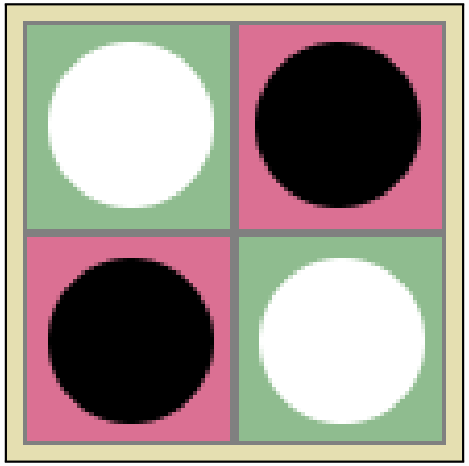
Illegal moves:





Konobi rules Cont.

It's also **illegal** to form a **crosscut**, i.e., a 2x2 pattern of stones consisting of two weakly connected Black stones and two weakly connected White stones.



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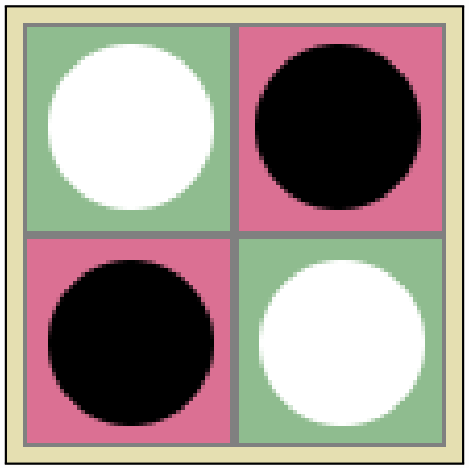

If a player can't make a move on his turn, he must **pass**. Passing is otherwise not allowed. There will always be a move available to at least one of the players.

Konobi rules Cont.

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The game is **won** by the player who completes a chain of his color touching the two opposite board edges of his color. **Draws are not possible**.

Starting game

The console version of the game can be started using:

```
> ./gradlew runConsole
```

The GUI version of the game can be started using:

```
> ./gradlew runGUI
```

Console User Interface

- `ConsoleBoardWriter`: board display;
- `ConsoleCellRepresentation`: conversion between cell color and its representation;
- `ConsoleInputHandler`: player input handling;
- `ConsoleMessageWriter`: messages to the players.

Messages are contained in the `Messages` class: its messages are used by the GUI implementation as well.

Graphical User Interface

- `GUI`: implements the game flow in a `JavaFX` application;
- `GUIBoardWriter`: board and GUI display;
- `GUIAsker`: boh;
- `GUIMessageWriter`: messages to the players.

The `Events` package defines events for the rules (PieRule, PassRule and EndGameRule); the events are processed by the `Handlers` package, which handles mouse inputs as well.