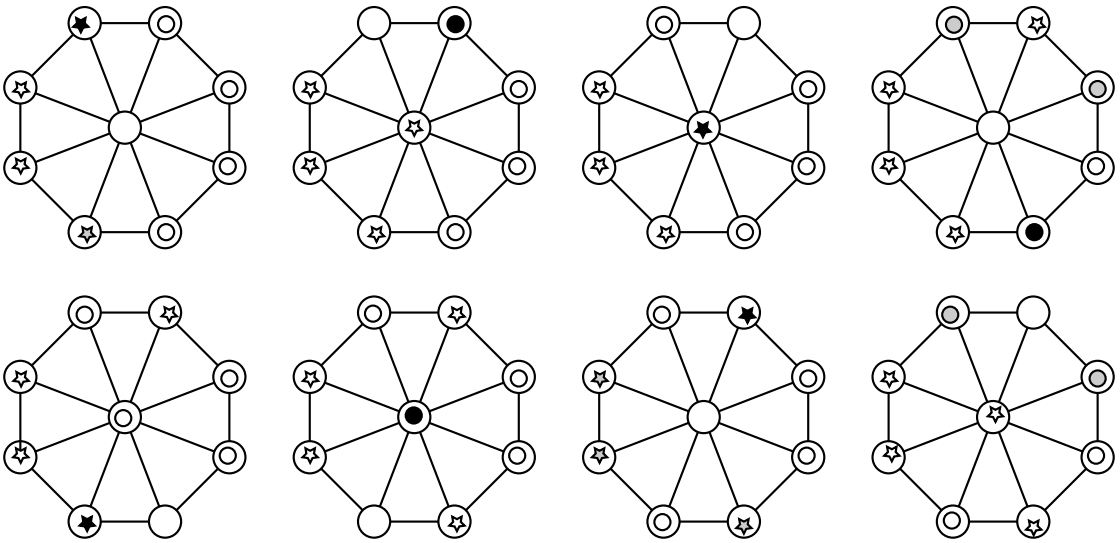
Mū Tōrere

Mū Tōrere is a traditional Māori game, which is played on a simple board consisting of eight kāwai (points or tentacles, sometimes called kewai) surrounding a central location (pūtahi). Each player has four perepere (pieces or counters), and at the start of the game they are placed on the kāwai, with each player's pieces covering half of the board. Players take turns moving one of their perepere to the empty location:

- If the empty location is a kāwai, they may move from any adjacent location (either adjacent kāwai or the pūtahi).
- If the empty location is the pūtahi the player may move only perepere that are adjacent to at least one of their opponent's perepere.

You win the game if your opponent cannot make a move.

Here is an example of the first few moves of a game of Mū Tōrere, with the first player being Stars and the second player Circles. The piece chosen to move at each turn is shown in black, and other potential moves are in grey.



After this opening, there two possible moves – which one should Circles play?

Task

You must provide a class that extends the abstract class `Player.java` which selects moves for Mū Tōrere. Comments in `Player.java` specify the contracts for the methods that you need to implement.

You are also provided with other classes which implement the game that you can use for testing purposes. The `MuTorere` class is the entry point to the program, and it takes as input the names of two concrete subclasses of `Player.java` which are the strategies used by the first and second players.

The main purpose of this étude is to get you working with your group – during the labs on Wednesday 14th and Monday 19th July you should be able to discuss the problem, come up with some strategies for solving it, and write a program to implement your chosen solution. Your solution will be compared to the other groups' in the town hall on **Thursday 22nd July**, so as a matter of pride we suggest that you don't just submit a program that, for example, just acts randomly hoping to get lucky at some point!

This étude must be completed by **12 noon on Wednesday 21st July** and emailed to `mark326` so that the results can be discussed and compared in the town hall on July 22nd.

Relates to Objectives

2.2, 2.8, 3.5, 4.1, 4.2, 4.3, 4.4

(Group)