

Othello Game Rules

TCS Module 2: Software Systems
Programming Project 2022/2023



Version: 1.0

This document describes the rules for the Programming Project game of 2022/2023.

The rules as stated in this document might differ from the official rules. In case of any difference, this document is leading. If there is a game-breaking mistake in this document (e.g. an uncovered edge case or clashing rules), please send an email to Tom van Dijk (t.vandijk@utwente.nl).

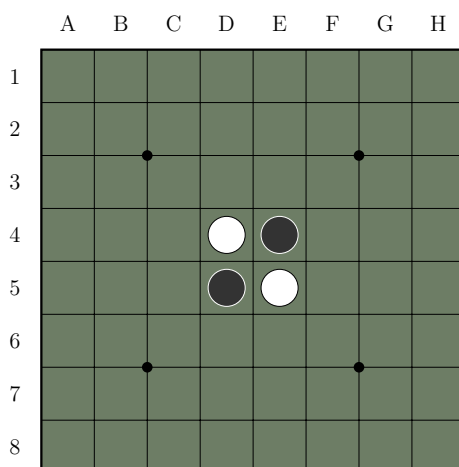
Othello

Othello is a two-player board game where the two players take turn placing discs of their color. Each move must capture at least one disc of the opponent. If this is not possible, the player must pass, unless the other player also cannot make such a move. The game ends when neither player can capture from their opponent. The winner is the player with the most discs. The game ends in a draw when both players have the same number of discs.

Othello is a variant of the game Reversi.

Setup

The game starts with four discs placed as follows:



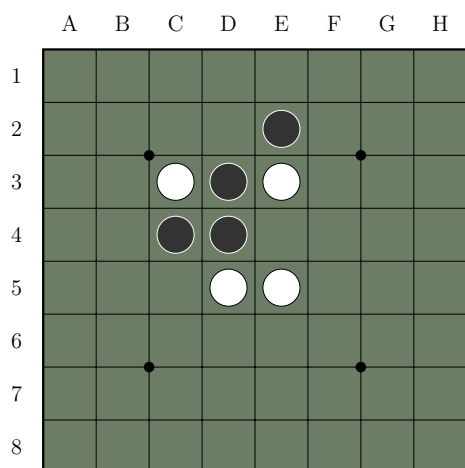
Rules

Black plays first. Each turn consists of a single valid move, which either places a disc on the board, or is a passing move. The current player must place a disc of their color on an unoccupied square of the game board, such that at least one disc of the opponent is captured. If this is not possible and the opponent could play such a move, then the player must pass. A player may only pass if they cannot play a normal move and the opponent can play a normal move.

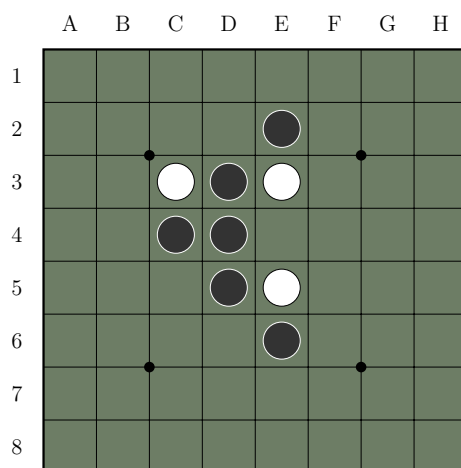
Discs are captured when they are outflanked by the newly placed disc and an existing disc of the same color. See Figure 1 for an example. Here a black disc is played on E6. The white disc on D5 is captured. The white disc on E5 is not captured. If there was a white disc on E4, then all three white discs on E3, E4, and E5 would be captured. Discs are captured along the horizontal, vertical and diagonal directions. Discs on the corners cannot be captured.

The game ends when neither player can place a disc that captures discs of the opponent. The winner of Othello is the player with most discs. The game ends in a draw when both players have the same number of discs.

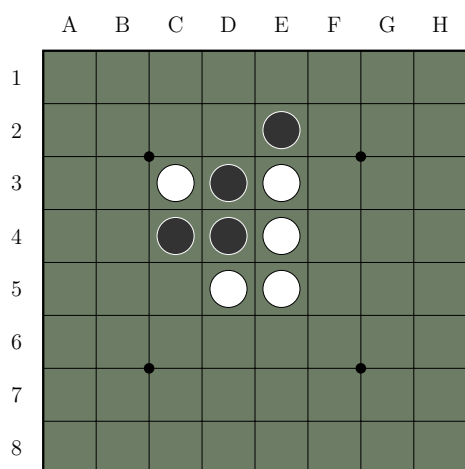
If you want to know more about Othello strategy, see: <https://www.ffothello.org/livres/othello-book-Brian-Rose.pdf>



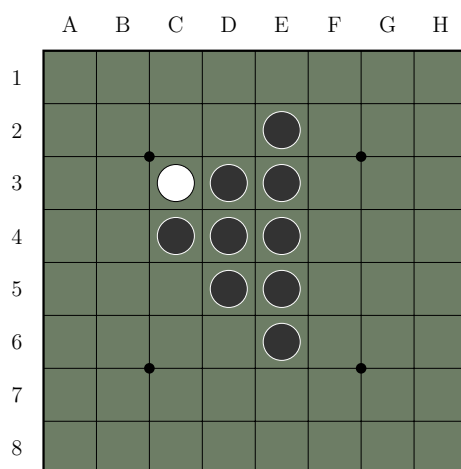
(a) before



(b) after



(c) before



(d) after

Figure 1: Examples of moves by the black player.