

CSE462 – Fall 2025

Term Project

Strategic Board Game

In Term Project, it is expected from you to implement an AI-based strategic board game. The rules of the game are listed in the following sections.

Your application should have a CLI or GUI interface to handle a demo in the grading session. In the demo, Player 1 will be the AI, and Player 2 will be the human. We will manually evaluate the behaviors and also the success of your AI module.

Submission Deadline: December 28, 2025 23:59

Demo Hour: Will be announced later. **Good luck!**

0.1 The Rules of the Game

The board size is 7*7.

The blue symbol is the piece of Player 1 which is the AI-based player. The red symbol is the pieces of Player 2 which is the human player.

Every player has 1 piece, and the game starts with the board configuration, as shown in Fig. 1.

When the game starts, Player 1 moves first.

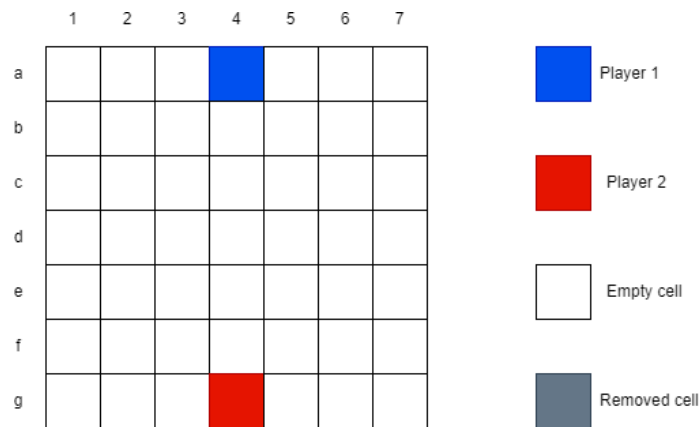


Figure 1: Initial board configuration.

0.2 The Rules of the Moves

On each turn, the current player makes two subsequent moves:

- Moving her piece to one of its eight neighbors. She can move it vertically, horizontally, or diagonally. She can't move it to a removed square, outside of the board, or to his opponent's square.
- She can remove a square from the board. It can't be an already removed one or a square with a piece on it.

The board is shared between both players. If one player removes a square, she also can't move her piece to that square.

0.3 Game Finish

The game ends when one of the players has no place to move her piece on his turn.

0.4 Sample Game

See the figures [Fig.2](#) and [Fig.3](#).

0.5 Grading

Only the projects implemented using the Min-Max algorithm with C and C++ programming languages will be graded.

Q-Learning or Deep Q-Learning Networks will not be accepted !!!

If you have any issues with please send an email to:

cavidebalki.gemirter@std.yeditepe.edu.tr

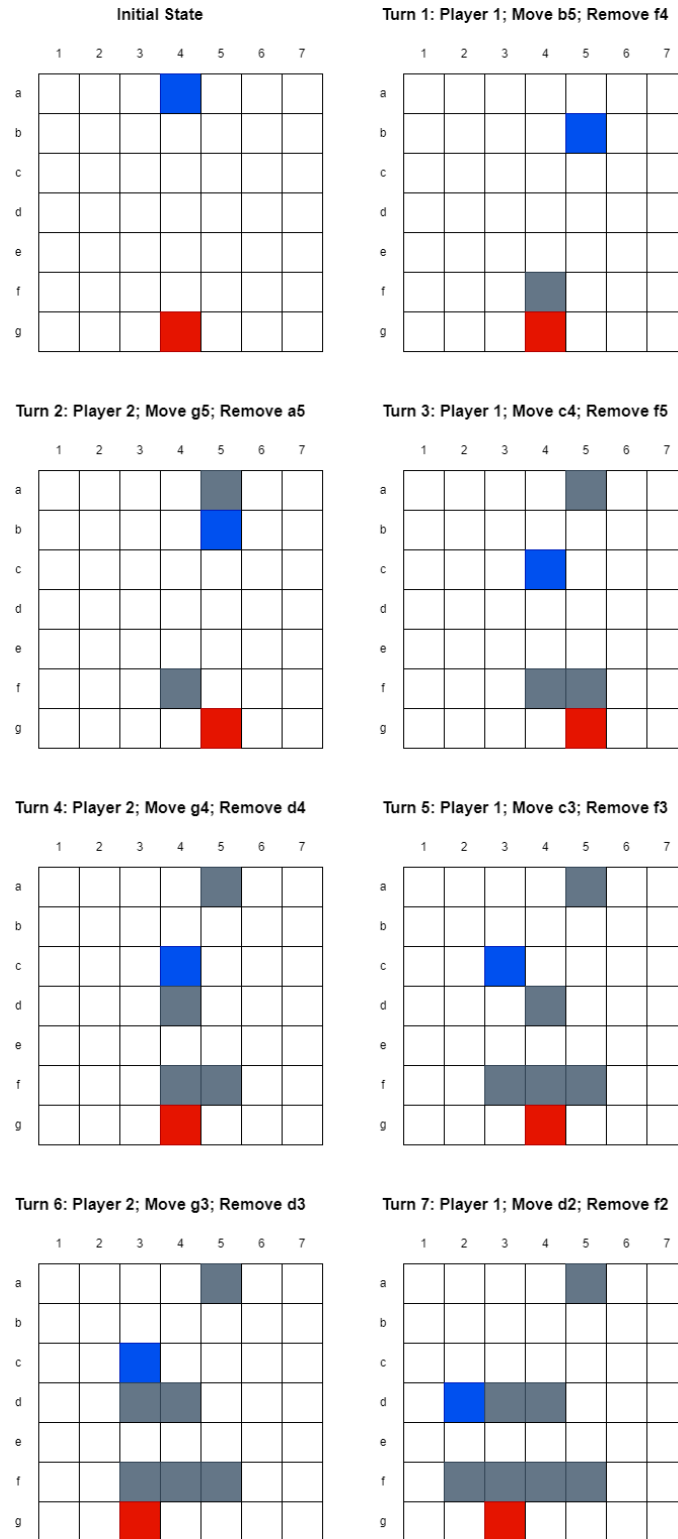
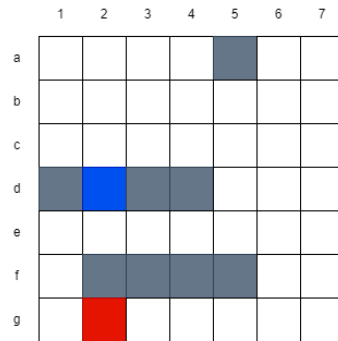
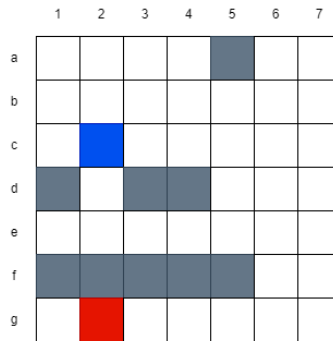


Figure 2: Sample game

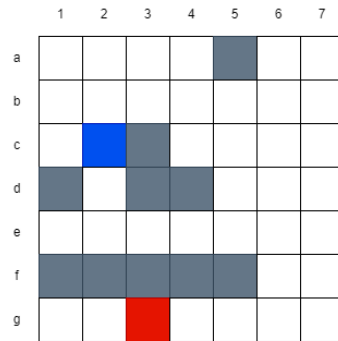
Turn 8: Player 2; Move g2; Remove d1



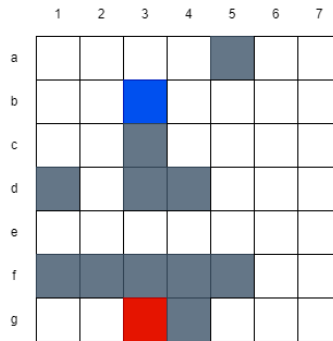
Turn 9: Player 1; Move c2; Remove f1



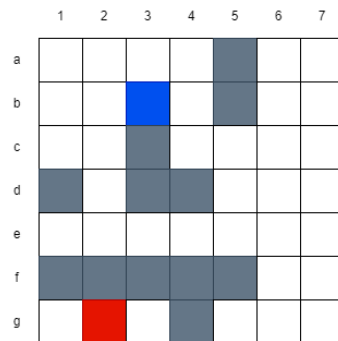
Turn 10: Player 2; Move g3; Remove c3



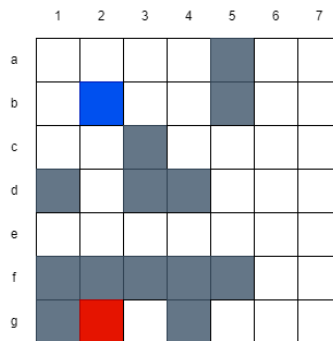
Turn 11: Player 1; Move b3; Remove g4



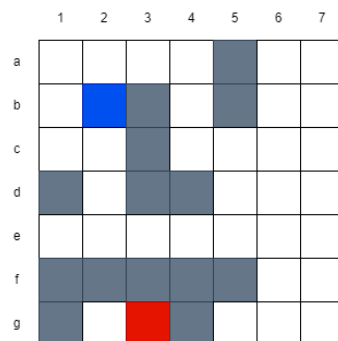
Turn 12: Player 2; Move g2; Remove b5



Turn 13: Player 1; Move b2; Remove g1



Turn 14: Player 2; Move g3; Remove b3



Turn 15: Player 1; Move b1; Remove g2

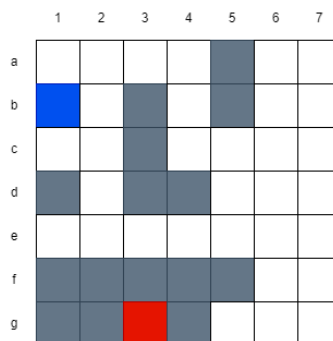


Figure 3: Sample game (cont.)