

## 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.

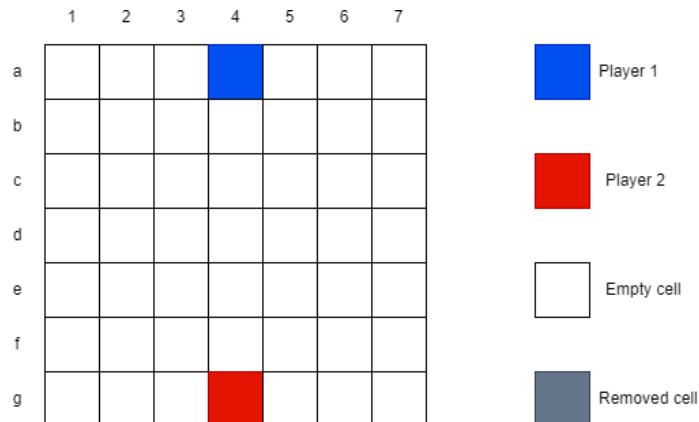


Figure 1: Initial board configuration.

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## 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**

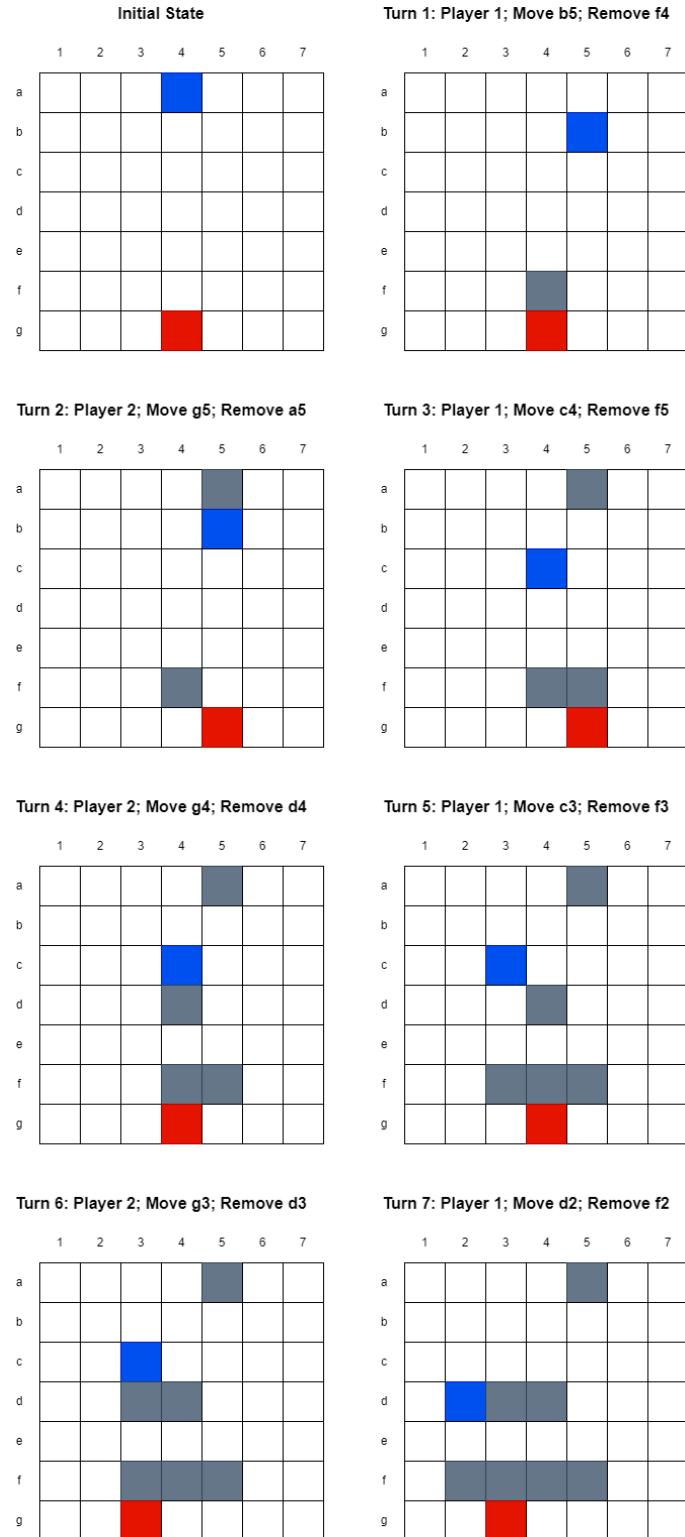


Figure 2: Sample game

Turn 8: Player 2; Move g2; Remove d1

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 9: Player 1; Move c2; Remove f1

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 10: Player 2; Move g3; Remove c3

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 11: Player 1; Move b3; Remove g4

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 12: Player 2; Move g2; Remove b5

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 13: Player 1; Move b2; Remove g1

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 14: Player 2; Move g3; Remove b3

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Turn 15: Player 1; Move b1; Remove g2

	1	2	3	4	5	6	7
a							
b							
c							
d							
e							
f							
g							

Figure 3: Sample game (cont.)