Development of Thai checkers program

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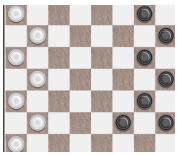
Abstract

This project centers on the development of a computer program that uses algorithms to simulate and optimize moves in Thai checkers. By employing a robust algorithm, the program is capable of calculating the best possible moves during gameplay, helping users to not only engage with the game but also enhance their understanding and strategies. The interactive nature of the program allows players to study different approaches, receive suggestions for stronger moves, and analyze their gameplay step by step. The development process involved coding the application using HTML, JavaScript, and CSS, making it both accessible and functional across platforms. The final product has demonstrated a high level of feasibility, performing efficiently and offering valuable feedback to players aiming to improve their skills. This tool is particularly useful for those who are training for competitive play, as it supports decision-making under various scenarios, helping users build their strategic thinking. By using this program, players can gain a more systematic understanding of Thai checkers, making it a valuable resource for both casual learning and more formal training purposes.

introduction

Games are something that helps develop people's learning because in playing games, there must be a process of thinking and analyzing that will make them follow the instructions in the game. If the game has good content and creativity, it will be beneficial to the game players themselves. Including the game players will receive what the game creator wants to communicate correctly. And in the current world, it can be said that games are a part of life for children and youths. Because games are something that is not difficult to find, it is important that we choose to play games that are good and beneficial to the game players. The creators of the project saw the importance of this point, so they had the idea to develop a creative checkers game that is beneficial to the youth.



Objective

Create a Thai checkers program to develop skills and analyze competitive games and To help develop Thai checkers skills

Mythology

Step 1

Create a Thai checkers grid and the pieces of both sides.

Step 2

Create a function to check if the player's moves are in accordance with the rules of Thai-Osset, such as the rules for each move, the rules for eating, the rules for continuous eating, and checking whether the game has ended.

Step 2

Create an algorithm to calculate the moves of the computer using the principles of the greedy algorithm and using graph theory and tree diagrams to help by using the concept of Breadth First Search (BFS) to calculate each move because the principle of BFS is a distributed search when there is time and data capacity as factors, it can still be calculated correctly, just the depth of the calculation will change because there are control factors.

Result

User Satisfaction

User	Program performance	Correctness	Fun and participation	Average score
1	6	7	6	6.3
2	5	8	7	6.7
3	9	10	8	9
4	8	9	8	8.3
5	7	5	9	7
6	10	6	10	8.7
7	5	4	9	6
8	6	7	7	6.7
9	9	8	8	8.3
10	4	6	10	6.7
Average score	6.9	7	8.2	7.36

Figure 1 : Chart of user satisfaction (1)

User Satisfaction

User	Easy of use of the program	Can be used in practice	Interest	Average score
1	8	5	9	7.3
2	6	7	10	7.6
3	9	8	8	8.3
4	7	6	7	6.7
5	5	9	5	6.3
6	10	10	6	8.7
7	8	4	9	7
8	4	5	8	5.6
9	7	8	4	6.3
10	6	6	7	7
Average score	7	6.8	7.3	7.03

Figure 1 : Chart of user satisfaction (2)

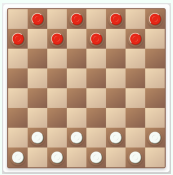


Figure 3: Thai checkers program image by writing code