

Design Document
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Connect 4

Data

Board - Array of values for pieces played in current game

Saved Game - A saved array that can be loaded into

Turn - The player that should be playing

“Game Play”

The user will use the menu to load a game or start a new one, and it will be displayed, the user will be prompted to play a piece in a certain area, then the turns will change until a win is found. Each move will save to a file so that it can be loaded at any point.

Functions

main() - Dylan Carson - Next Week

Data: Nothing

Returned : The new game, or load game function.

Functionality: Introduce the program, and load up the menu function.

newGame() - Mohd Shad - Next Week

Input Parameters:

Returned Output: An Empty Board, and beginning

Functionality: Start a new game with an empty board for the user.

loadGame() - Dylan Carson - Next Week

Input Parameters: A saved game

Returned Output: a partially played game

Functionality: Allow the user to load a game from a file.

playerMove() - Mohd Shad - Next Week

Input Parameters: Turn & position

Returned Output: A new board with the user move

Functionality: Let the user make their move, and trigger the check win function.

checkWin() - Dylan Carson - Next Week

Input Parameters: The 2D array of the game board

Returned Output: If a win was made on the move just done

Functionality: Checks if there are any 4 in a rows, if anybody has won. Will end game if so will do nothing if not.

saveGame() - Dylan Carson

Input Parameters: Board 2D array - Next Week

Returned Output: A file

Functionality: Save the game after each move, in order to be able to be able to be loaded at a different time.