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Overview

Our project is a simple two player board game. Two players play against each other in the game of Connect Four. The objective of the game is to connect four of your own pieces (determined at the start of the game) in vertical, horizontal, or diagonal order.

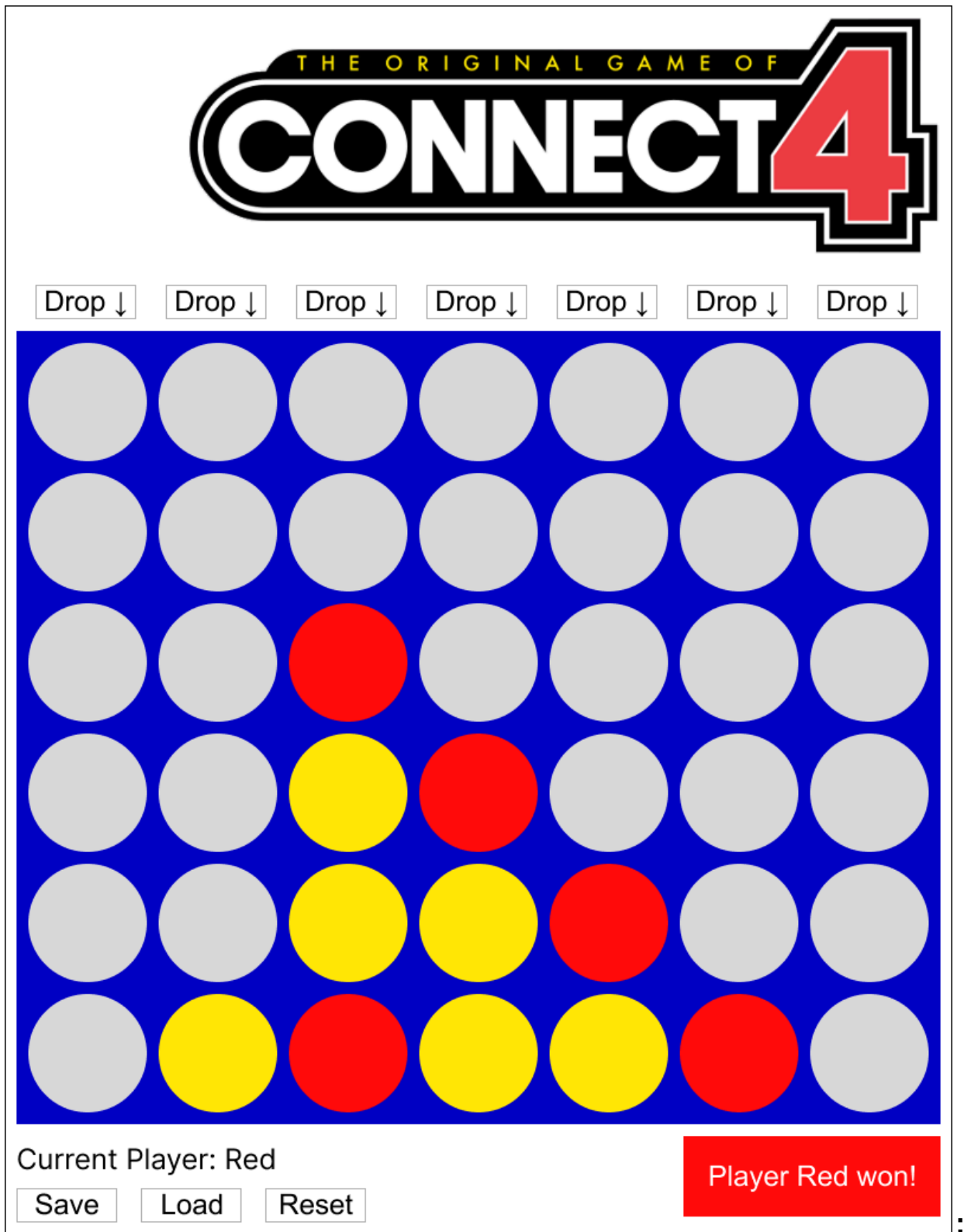
The game starts with an empty 7x6 grid, and then player 1 starts by dropping their piece into any given column, and it will then be placed at the very bottom row. Then, player 2 will then follow that up by dropping their piece anywhere on the board, and then their piece will fall as low as the row allows (if a piece is already in that column, it will land on top of it). The game continues until either the player or the computer achieves four consecutive pieces in a row, or the grid is filled without a winner, resulting in a draw.

The board updates after each move, and after every turn, the game checks if there is a winning combination. If a player gets four consecutive pieces in any direction, the game ends, and that player is declared the winner. If the board is completely filled and no one has won, the game is a tie.

Functional Requirements:

1. Then, the players will be prompted to enter their names.
2. There is a button that allows the players to start the game.
3. Upon starting, the board appears. It is a 7x6 grid.
4. Red player goes first
5. Then, yellow player follows
6. The players' names are printed below the board. The current player is indicated.
7. There are buttons above each column for placing tokens. Each button will "drop" a token into the lowest available space in a column. The game will then check for victories.
8. The game continues until a player has four pieces in a row in vertical, horizontal, or diagonal order. Then, a winner is declared.
9. If the board fills up, then it is a draw.
10. There is a save button which will save the board state into a .txt file.
11. There is a load button which will load the .txt file into the board.
12. There is a button which will reset the board completely.

User Interface Prototype



User Interface Requirements:

1. There is a save button which will save the board state into a .txt file.
2. There is a load button which will load the .txt file into the board.
3. There are buttons above each column for placing tokens.
4. Button to reset the board
5. There is a display of the board state.
6. There is an indicator for the current player turn.
7. After a victory, there is an indicator for who has won.

Project Plan:

Requirement	Deliverable 1 (UML)	Deliverable2 (Alpha)	Deliverable 3 (Beta)
FR1			x
FR2			x
FR3	x	x	x
FR4		x	x
FR5		x	x
FR6			x
FR7	x	x	x
FR8	x	x	x
FR9			x
FR10			x
FR11			x
FR12			x
UIR1			x
UIR2			x
UIR3			x
UIR4		x	x

UIR5		x	x
UIR6			x
UIR7		x	x