Nine Men Morris

User story

1. As a player, I need an empty board of 9\*9 grids with 24 valid intersection points in order to start a game.
2. As an player X, I need to make a move by placing a White disk on an empty cell
3. As an player O, I need to make a move by placing a Black disk on an empty cell
4. As an player O/X , I need to know if I formed a ‘mill’
5. As an player O/X , I need to know after I formed a mill if I can take one disk from opponent away
6. As an player O/X , I need to know if I have placed all my disks and can move the placed disk to their adjacent position
7. As an player O/X , I need to know if the number of my disks is reduced to 3 so I can fly.
8. As an player O/X , I need to know if the game is over after each move

Acceptance Criteria

1.1 When a new game is started, then there will be an empty board 9\*9 board where 24 valid intersection cell is empty

1.2 Given a board, when a cell is referenced by a row index greater than 8 , then the cell reference is invalid

1.3 Given a board, when a cell is referenced by a column index greater than 8 , then the cell reference is invalid

1.4 Given a board, when a cell is referenced by a (row, column) index that doesn’t exist on the board , then the cell reference is invalid

2.1 Given an ongoing game with X's turn, When the X player makes a valid move (clicks on an empty cell), then White disk is placed in the cell and the turn is changed to player O.

2.2 Given an ongoing game with X's turn, When the X player makes an illegal move within the board (clicks on a non-empty cell), then the cell is not changed, the turn is not changed, and an “illegal move” message is displayed

2.3 Given an ongoing game with X's turn, When the X player makes an illegal move outside the board, Then the turn is not changed

3.1 Given an ongoing game with O's turn, When the X player makes a valid move (clicks on an empty cell), then Black disk is placed in the cell and the turn is changed to player X.

3.2 Given an ongoing game with O's turn, When the O player makes an illegal move within the board (clicks on a non-empty cell), then the cell is not changed, the turn is not changed, and an “illegal move” message is displayed

3.3 Given an ongoing game with O's turn, When the O player makes an illegal move outside the board, Then the turn is not changed

4.1 Given an ongoing game, when there are three adjacent same color disks appearing, then the ‘mill’ formed and the system display a mill formed

5.1 Given an ongoing game, when a mill formed, the system will allow that player who formed a mill to take away a disk from the opponent.

5.2 Given an ongoing game, when a mill formed, the system will make sure that a piece in an opponent's mill can only be removed if no other pieces are available

6.1 Given an ongoing game, when all the player’s disks were placed on the board, then the system will allow the user to start the second phase of moving their disks into adjacent empty cell

7.1 Given an ongoing game, when all the player only has three disks left on the board, then the system will allow the user to fly.

8.1 Given an ongoing game without any player only has two pieces left or by don’t have any legal move to make and it is X turn, when the x player makes a valid move and the other player only has two pieces left or don’t have any legal move to make, then the system will display that player X win.

8.2 Given an ongoing game without any player only has two pieces left or by don’t have any legal move to make and it is X turn, when the X player makes a valid move and the other player only has more than two pieces left or still has legal moves to make, then the game continues and it becomes player O’s turn