Take A Turn

Primary Actors:

The players(bot/real)

Stakeholders and Interests:

The player: Players will see free spaces, play pieces and pieces already laid on the board, depending on those pieces the player needs to strategically place their pieces to maximize winning chance.

Pre Conditions:

- The system starts a game with options selected by the user
- System did not announce a winner yet for current session

Post Conditions:

-System checks for a winner and ends game when there is a winner, otherwise continue
-System makes the board ready for the next player when there is no winner

Main Success Scenarios:

1. System provides a message about which player's turn it is
2. System checks if it's player's /*current probable move is the player's*/ first turn [Alt1: First Turn]
3. System determines it is not the first turn and checks if current player has any free space for their piece [Alt3: No pieces/spaces]

4. System provides pieces being already plaid and which spaces and pieces are available for play
5. Player selects their playable piece and rotates or flips it as they want
6. Player selects which space they want to put it in
7. System checks if the move is legal. [Alt2: Legal Move]
8. System informs move accepted
9. System records selected space with player's piece and displays on the board
10. System makes the space unchangeable for further players

11. System removes the current piece from available pieces for the player
12. System checks if there are other pieces available for the player [Alt3: No pieces remaining/No spaces remaining for any piece]

13. System ends the use case

Take A Turn

Alternative Flows:

1. First Turn:
   1. System let the user know it is the player's first turn,shows available pieces and highlights the space to start from
   2. Player selects a piece from available pieces and puts it in highlighted space (corners) as first move [Alt 2: legal move]
   3. Continues main scenario step 8

2. Legal Move:
   1.Player selects already selected spaces or not matching color/corner matching rule or for the first turn didn't chose the highlighted space
   2.System lets the player know move not accepted
   4.For first turn: use case continuses at Alt1(First Turn), for other turns use case continues at main scenario step 4
3. No pieces/spaces for move:
   1.System checks and displays winner page when found winner.
   2.Use case ends

4. Player exits use case:
   1.At any of player steps above player can elect exit or pass to end the use case

Exceptions:

1. Time out (Difficulty level): For higher difficulty level, system will show time remaining And if any moves are not made within the time then system will inform the player about timed out and use case will end
2. Player requests exit and system handles the current session accordingly and use case ends
3. Player request pass, then system ends the use case and moves on to next player

Special Requirements:

-System needs to be kids and color blindness friendly,see the vision documents for more
-Confirmation of accepted move (reason for failure) needs to be shown (Hint)
-Players can select help me/exit and system retrieves help me/exit page at any time during the use case
-If selected game has a bot player, needs to be handled accordingly

Take A Turn

Open Issues:

1. What will be the wait time between when system displays the message that move accepted and displaying winner after removing the piece if there is a winner? move on if no winner decided
2. To make it more difficult in higher difficulty, should we hide other player's pieces? Players will be able to see only their pieces.
3. Recording and storing the award systems for moves and winner, is not being decided yet.