Take a Turn

Primary Actor: Player

Stakeholders and Interests:
- *Player:* Wants to play their turn in an uninterrupted progression of actions, without bugs or other impediments. Wants the game to be fair, accessible and well-balanced. Does not want to be restricted by clunky mechanics or ambiguity.

- *Parents*: Expect a clean, high quality entertainment experience for their children which will exercise strategic planning and spatial reasoning skills without boring, overwhelming or otherwise distressing their children.

Preconditions:
- Game settings have been specified in-game setup menu prior to commencement of game.
- In the case that this turn is not the first turn, the previous player's turn has been successfully completed, resulting in a bust or a legal end-of-turn.

Success Guarantee (Postconditions):
Precisely one of the following has occurred:

1. The player has won the game, successfully moving their pieces to the top of 3, 5, or 7 columns. (dependent on game settings)

2. The player has Bust, ending up with unplaced pieces but unable to make a valid move

3. The player decides to end their turn, replacing the runners that they placed on the board during their turn with pieces of their colour.

Main Success Scenario:
1. The user's turn begins with the commencement of the game or the end of the previous player's turn.
2. The system informs the user that it is their turn and prompts them to roll their dice
3. The player rolls their dice
4. The system prompts the user to group their dice into two pairs
5. The user groups their dice into pairs and the system highlights the user's valid moves (if any)
6. The user makes as many valid moves as possible. If there are no valid moves, the user Busts
7. The system prompts the user to either end their turn or roll again, in which case the system returns to step 2. Otherwise, the next player's turn begins. [Use Case Ends]

Alternative Flows:

alt1: Player Busts
    1. The user busts and automatically forfeits their turn.
    2. The system informs their user that they are busted and prompts them to end their turn.
    3. The user ends their turn.
    4. The system passes control to the next player in the turn progression [end of use case].

alt2: Player Wins
    1. The user successfully captures the required amount of columns to win.
    2. The system informs the user that they have won and gives the user the option to return to game setup.
    3. The user enters game setup or terminates the program [end of use case].

alt3: Player opens options menu
    1. The user prompts the system to open the options menu.
    2. The options menu use case begins [end of use case].

Exceptions:
- If at any time during the progression of the player's turn the system becomes unresponsive or crashes, the system has failed and the game cannot continue.
- Consider adding an advisory message to the user in the event of system failure

Special Requirements:
- User interface must provide accommodation for users affected by colour-vision impairment

Open Issues:
- Special consideration should be given to cases where the user can make no valid move to minimize chance of system failure

- User must be aware of the rules of play. Consider adding a tutorial use case.

Prepared by: Tyler Morgan, Group 7.