Case: Initiate a Game

Primary Actor: Player
Stakeholders and Interests:

- Player: wants to initiate a game and wants to play with player/computer.

Preconditions:

- The user should already have java runtime installed on their system.

- The player must have started the game.

Success Guarantee (Postconditions):

- The system initiates the game of Blokus.
- The system successfully setups all the player(s) and AI(s) configurations.

Main Success Scenario:

1. The system provides the user to select his opponents and/or CPU, and board size.
2. The user selects the no. of players and/or CPU to play with and the size of the board.
3. The user is satisfied with their selections. (Alt1: The user is not satisfied)
4. The system provides the option to move forward.
5. The user opts to move forward.
6. The system provides the option to the user to select the time limit and difficulty of the game.
7. The user selects the time limit and difficulty of the game according to his/her preferences.
8. The user is satisfied with their choices. (Alt2: The user is not satisfied)
9. The system provides the option to move forward.
10. The user opts to move forward.
11. The system provides the option to select the color for the pieces or randomize the selection.
12. The user selects the color of the pieces according to his/her preferences. (Alt3: The user opts to randomize the color selection)
13. The user is satisfied with their selection. (Alt4: The user is not satisfied)
14. The system provides the option to start the game.
15. The user starts the game.
16. The system initiates the game of Blokus.

Alternative Flows:
Alt1: The user is not satisfied

1. Flow resumes at Main Success Scenario Step 1.

Alt2: The user is not satisfied.

1. Flow resumes at Main Success Scenario Step 6.

Alt3: The user opts to randomize the color selection.

1. Flow resumes at Main Success Scenario Step 14.

Alt4: The user is not satisfied.

1. Flow resumes at Main Success Scenario Step 11.

Exceptions:

- The game will not save the current session setting if the process is closed in between.

Special Requirements:

- Blocks can have numbers for color blind players and can provide colors and sizes of text fonts used.

Open Issues:

- Is the player provided with enough hints to start the game?

- How the game state is going to be loaded?

- If there are no saved game sessions will the load fail?

Case: Take a turn

Primary Actor: Player
Secondary Actor: Computer
Stakeholders and Interests:

- Player: wants to take a turn with a select shape.

Preconditions:

- The user has initiated the game.

Success Guarantee (Postconditions):

- The user has played his/her valid move or if there are no valid moves, the system passes the turn of the user.

Main Success Scenario:

1. The system checks if there are any valid moves for the user.
2. The system asks the user to play the valid move and provides the container of pieces to select piece from. (Alt1: There are no valid moves)
3. The user selects the piece.
4. The system provides the option to rotate and/or flip the piece.
5. The user opts to rotate and/or flip the piece. (Alt2: The user opt not to rotate and/or flip the piece)
6. The system provides the board to place the user's selected piece.
7. The user selects the place on the board.
8. The system verifies user's move.
9. The system places user's selected piece on the board. (Alt3: User's move is not valid)
10. The system moves on to the next user.

Alternative Flows:
Alt1: There are no valid moves.

1. The system notifies the user that there are no valid moves for them and skips their turn

2. Flow resumes at Main Success Scenario Step 10.

Alt 2: The user opt not to rotate and/or flip the piece

1. Flow resumes at Main Success Scenario Step 6.

Alt3: User's move is not valid

1. Flow resumes at Main Success Scenario Step 2.

Exceptions:

- If for some reason, any of the functionality fails during the gameplay and the game crashes then the player is provided an option to provide error logs to the developer.

Special Requirements:

- Blocks can have numbers for color blind players and can provide colors and sizes of text fonts used.

Open Issues:

- Is the player provided with enough hints to play the game or take a turn?

- Does the system ask player to save the game state before clicking on "x" button?

- If the game unexpectedly crashed is the game state saved?

- What if the player surrenders on the first turn?