**Initiate a Game**

**Primary Actor:** Player

**Secondary Actor:** Computer

**Stakeholders and Interests:**

* *Player:* wants to initiate a game and wants to play with player/computer.
* *Developer: wants to take feedback from player/user and what they found annoying/difficult to find and solve the bugs.*

**Preconditions:**

* Player has to set up a game session, number of players, numbers of computers to play with, block color and start the game.

**Success Guarantee (Postconditions):**

* Game gives a feedback when the time is up/ or no shapes left and who wins the game, this notifies the player that the game is over and if he may wish to play again, he can.

**Main Success Scenario:**

1. The player clicks on play button.
2. The system gives the player the opportunity to set grid sizing, number of players, and CPU(s).
3. The player sets the board size and number of players, and CPU(s) and clicks on continue [Alt1: Player sets no CPU i.e. more than one player].
4. The system asks the player to set a time limit, for how long, and difficulty for the AI.
5. The player sets the time limit, for how long, and the difficulty for AI [Alt2: Player sets no time limit].
6. The system then asks the player to provide block color for each player.
7. The player sets the block color for each player and starts the game. [Use case Ends].
8. The system sets up the game board, time limit, score, player, and computer(s) and gives player the first turn.
9. The system provides a list of shapes the player can select, flip, and rotate and use it to take a turn on the game board.
10. The player selects the desired shape and places it on the board.
11. The system verifies that the player’s move is valid.
12. The system places the piece on board and stores the information.
13. The computer player then takes a legal strategic turn based on player’s turn.
14. When the time limit is over or the player/computer surrenders, the system decides who has fewer total blocks. [Alt 3: No space to place the available shape]
15. The system gives the player an opportunity to play again and declares the winner [Use Case Ends].

**Alternative Flows:**

*Alt1:* Player sets no CPU i.e. more than one player

1. The system disables the difficulty option for CPU.
2. Flow resumes at Step 4.

*Alt2:* Player sets no time limit.

1. The system disables the minutes option and sets no time limit for the player.
2. Flow resumes at Step 5.

*Alt3:* No space available to place the remaining shapes.

1. The system skips the player’s turn and let’s computer(s) take their turn until every computer surrender.
2. Flow resumes at Main Success Scenario Step 15.

**Exceptions:**

* If at any time, the player move fails to register on board state, the game board gets filled with computer’s turn.

**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?