# Use case: Setup a game

## Primary Actor: Player

## Stakeholders and interests:

- Player: Want to play a match of Kingdomino with or without other players present, want to not have to carry the physical board game around and want a smooth bug-free experience.
- Debugger Staff: Keep the game updated and bug-free, fix any bugs that are present and maintain the functionality of the application.

## Preconditions:

The game has compiled properly and at least 1 player is present. The game-modes are present.

## Success Guarantee (Postconditions):

The game begins. The user and other players are aware that the game has begun and have claimed their initial domino. Computer-player (AI) have been initialized, have claimed their initial domino, and are waiting their turns.

## Main Success Scenario:

1. The user requests a list of game-modes that are currently available. [Alternate 1: No game-modes available]
2. The system retrieves a list of game-modes available such as default/original mode, 2-Player mode, 'The Mighty duel', 'Harmony', 'Middle Kingdom' and 'Dynasty' and displays them to the user.
3. The system provides the user with the opportunity to select a game-mode or to exit the use case. [Use Case Ends].
4. The user selects the game-mode they want to play.
5. The system records the game-mode selected by the user.
6. The system retrieves a list of the number of players that can play the selected game-mode.
7. The system provides the user with the opportunity to select the number of human players that will play the game.
8. The user selects the number of human players that will play.
9. The system records the number of players selected.
10. The system checks if more players are required to play the selected game-mode. [Alternate 2: Human players less than total players]
11. The system retrieves the details for the chosen game-mode and displays the details to the user.
12. The system provides the user with the opportunity to select the color associated to each player's meeple.

13. The user selects the color associated to every player's meeple. [Alternate 3: Multiple meeples with the same color]
14. The system records the color associated to the player's meeples.
15. The system provides the user with the opportunity to change the name of the players. [Alternate 4: Names not changed]
16. The user inputs the name of the players.
17. The system records the name of the players.
18. The system provides the user with the opportunity to confirm the settings and start of the game.
19. The user confirms that they want to begin the game with their selected settings. [Alternate 5: User declines to begin]
20. The system begins the game and displays 4 randomly selected dominos with their terrain side visible from the overall deck available and removes them from the deck.
21. The system randomly selects one of the players and provides them with the opportunity to make the first move and claim their initial domino.
22. The selected user selects their initial domino.
23. The system records the domino selected by the user.
24. The system removes the domino from the selection window.
25. The system checks whether all players (Humans and AI) have claimed their initial domino [Alternative 6: Player(s) haven't claimed a domino]
26. The system displays 4 randomly selected dominos with their blank side hidden and removes them from the deck. [Use Case Ends].

## Alternative Flows:

Alternative 1: No game-modes available

1. The system informs the user that no game-modes are currently available to be played. [Use Case Ends].

Alternative 2: Human players less than total players

1. The system informs the user that AI players will be required.
2. The system provides the user with the opportunity to set the difficulty for the AI controlled 'meeples'.
3. The system retrieves a list of difficulties available for the AI controlled 'meeples'.
4. The user selects the difficulty of the AI controlled 'meeples'.
5. The system records the difficulty selected by the user.
6. Flow resumes at main success step 11.

Alternative 3: Multiple meeples with the same color

1. The system informs the user that each meeple must have a unique color.
2. Flow resumes at main success step 12.

Alternative 4: Names not changed

1. The system assigns random names to each player.
2. The system records the name of the players.
3. Flow resumes at main success step 18.

Alternative 5: User declines to begin

1. Flow resumes at main success step 2.

Alternative 6: Player(s) haven't claimed a domino

1. The system randomly selects one of the players that has not claimed their initial domino and provides them with the opportunity to claim an unclaimed domino.
2. The selected user selects their initial domino.
3. The system records the domino selected by the user.
4. The system removes the domino from the selection window.
5. Flow resumes at main success step 25.

## Exceptions:

If at any time the system is unable to retrieve or provide details or is unable to begin the game, then the system informs the user of the problem, attempts to record the time and nature of the failure and the use case ends.

## Special Requirements:

Colors and sizes of text fonts used must provide - or be able to provide - for the visually impaired (e.g., color blindness, weak-sighted).

## Open Issues:

- Is the AI too difficult or too easy to play against?
- Can the game have more than 4 players?
- Do the user(s) know the rules and how to play the game?