

Fully Dressed Use Case Descriptions: “Determine Player Order”

Determine Player Order:

Primary Actor: Player

Stakeholders and Interests:

- Player: wants to know who will roll the dice first to begin the game
- Game developer: wants to ensure that the player who has the highest summation of numbers after rolling the dice gets to roll first when the game starts.

Preconditions

- The number of players has been determined.
- The player kinds have been selected such that whether a player is human or computerized have been determined.
- The players have chosen their marker colours.

Success Guarantee (Post conditions):

- The first player is ready to roll their dice to begin the game.
- A new game board is initialized in the starting position with the turn order as specified.

Main Success Scenario:

1. The system chooses a player.
2. The system gives that player the opportunity to roll two dice at once.
3. After the player chooses to roll the dice, the system adds value on both the dice to calculate its' sum.
4. The system stores the summation value for its' corresponding player.
5. The system then chooses the next player.
6. Flow resumes at Step 2 until Step 5.
7. The system ensures that all the players have rolled the dice once.
8. The system then checks the players' summation value in descending order. [*Alt1: Two players have the same value*]
9. The system then lets the player with the highest summation value roll first in the game.
10. The system chooses the next player who has the second highest value to roll second in the game.
11. This process continues according to their summation value where the player with highest summation value rolls first and the player with the least value rolls last in each order of the game.

12. Use case ends.

Alternative Flows:

Alt1: Two players have the same summation value.

1. The system lets the players who have the same summation value to roll again.
2. Flow resumes at Main Success Scenario Step 8.

Exceptions:

- If at any time the system is unable to do the summation or cannot store the value to its' corresponding player, the order of player's turn cannot be determined.

Special requirements:

- The order of player's turn is maintained throughout the game.

Open issues:

- Is the dice roll random and fair?
- Is the summation done correctly?

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Sequence Diagram

