

## **Use Case 6: Roll The Dice**

### **Primary Actor:**

- **Player**

### **Stakeholders and Interests:**

- **Player:** Wants to roll the dice to obtain a combination that allows placing a stone on the board according to their satisfaction.
- **Other Players:** Interested in fair play and strategy based on the dice outcome.
- **System:** Ensures correct dice mechanics and re-roll limits.

### **Preconditions:**

- Game is in progress.
- It is the respective player's turn.
- The player has the stones available to place on the board.

### **Success Guarantee (Postconditions):**

- A valid combination is selected, and a stone is placed on the board.
- No stone is placed if no valid combination exists, player's turn ends.
- The next player can take their turn.

### **Main Success Scenario:**

1. The first player rolls six dice.
2. The system records the results of the dice.
3. Player receives two full or partial chances to re-roll, if combination unsatisfactory.
4. Player selects their preferred combination based on game rules after the final roll.
5. Player can place a stone.

### **Alternative Flows:**

- **Alt 1: Player rolls only once**

Player may choose to continue with only one roll of their dice. After Step 1, the flow proceeds to Step 4.

- **Alt 2: No valid combinations**

If the final roll results in no valid board placements, the player's turn ends, and they return the stone. The process resumes from Step 3 for the next turn.

**Exceptions:****1. Player has no Stones left to place:**

- If a player runs out of stones before rolling, their turn must be skipped. The system prompts the next player to take their turn.

**2. Dice Roll error:**

- If an error occurs while rolling the dice (e.g: incorrect number of dice rolled), the system must allow a re-roll to ensure fairness and consistency.

**Special Requirements:**

1. There must be clear instructions or indicators showing the re-roll limits (two re-rolls allowed) and valid combinations (based on the game rules).
2. The game board must be clearly visible to all players during dice rolling and stone placement to avoid confusion.

**Open Issues:**

1. Should there be a way to un-do an accidental roll in case of an honest mistake by the player?
2. Should there be a time limit incorporated to ensure rigid and timely gameplay experience?