

Primary Actors

- The User/Player(s)

Stakeholders & Interests

- Instructor Mark Hatcher
- Teaching Assistant Mushfiquis Salehin
- Other groups

Preconditions

- A game state is loaded or a new game has been created.

Postconditions

- A turn is taken for a player or computer
- The game state is updated (e.g a stone is placed on eligible squares, and scores are updated)
- The turn is passed to the next player/computer

Special Requirements

- The dice rolling mechanism is truly random and fair for each player
- System must show clear and concise feedback on which dice are selected to reroll
- System must be able to provide new colours and textures for the visually impaired
- System must be able to recognize, validate and display the special combinations to allow for correct placement

Main Success Scenario (Taking a turn)

1. The system prompts the player to roll 6 dice
2. The player selects to roll the dice
3. The system provides the player with the opportunity to reroll all or partial dice out of the 6
{alt 1: the player selects to confirm their roll}
4. The player selects how many dice to reroll
5. The system provides the player another opportunity to reroll all or partial dice out of the 6
{alt 1: the player selects to confirm their roll}
6. The player selects how many dice to reroll
7. The system provides the player with their final result of all 6 of their dice
8. The system provides the player with an opportunity to place a stone on the board corresponding to their roll combination {alt 2: The system passes the opportunity to place a stone due to lack of eligible squares} {alt 3: the player rolled a special combination}
9. The player places a single stone on any of the eligible squares
10. The system prompts the user to confirm their stone placement
11. The system updates the display of points for each player/computer
12. The system passes the turn to the next player

Alternate Cases

Alt 1: The player selects to confirm their roll

1. Flow resumes at the main success step 7

Alt 2: The system passes the opportunity to place a stone due to lack of squares with the player's dice combination

1. Flow resumes at the main success step 11

Alt 3: The player rolled a special combination

1. The system provides the player with the opportunity to place a single stone anywhere on the board, even on occupied squares, if they roll a six of a kind
2. The system provides the player with with the opportunity to place a single stone anywhere on any free space if they rolled a 5 of a kind or a full straight (1-6)
3. Flow resume at main success step 9