USE CASE: "SET UP A GAME"

Ricochet Robots Project

Group #6:

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Primary Actor: User

Stakeholders and Interests:
- Player: wants the game to work properly, be easy to use, entertaining, and possible to win.
- User: wants the game to be set up properly, and all the menus and settings to be functional.
- Parent: wants the game to be appropriate for their children playing the game.
- Team Member: wants to design, implement, and test the game to ensure it is working properly.

Preconditions: System has started up properly and provides the opening menu.

Success Guarantee (Postconditions): The board is displayed and has all the necessary objects on it, including the robots, colour markers, target spaces, and barriers. Each robot is in place on top of the space with the colour marker matching its colour. The number of human and computer players has been chosen.

Main Success Scenario:
1. The user selects to start a new game from the opening menu. [Alt 1: Another option selected]
2. The system provides a set of options for how many human players are playing, with options for 1 to 4 human players. Also, the option to change the settings of the game, such as the difficulty level and colour palette, is provided.
3. The user selects the desired number of human players and computer players. [Alt 2: User makes changes to settings]
4. The system displays simple board that has target spaces and standard barriers on it. [Alt 3: System displays complex board]
5. The system places the colour markers randomly on the board in spaces where there are no target spaces, and then the robots are placed on their matching colour marker.
6. The system is prepared for the game to start and the use case ends.

Alternative Flows:
Alt 1: Another option selected
1. If the user selects to load a game, then an exception occurs and the use case ends. Else if the user selects stats, the system retrieves and provides high scores. Else if the user selects help, the system provides rules for the game and interface directions.

2. The user informs the system that they are finished with the information they selected.
3. Flow resumes at Main Success Scenario Step 1.

Alt 2: User makes changes to difficulty level
1. If the user selects to change the difficulty level, the system changes the difficulty level to hard mode and takes note that it must use the complex board for the game. Else, if the user selects to change the colour palette, the system changes from the default colour palette (including red, blue, green, and yellow) to another colour palette, such as one that accommodates people with colour vision deficiency.
2. Flow resumes at Main Success Scenario Step 3.

Alt 3: System displays complex board
1. If the difficulty level has been set to hard mode, the system sets up the complex board that has target spaces, standard barriers, and also coloured diagonal barriers.
2. Flow resumes at Main Success Scenario Step 5.

Exceptions:
- If at any time the user decides to cancel setting up a new game, then the use case ends.
- If at any time the user exits the system, then the use case ends.
- If the user selects the load game option from the opening menu, then the use case ends.

Special Requirements:
- Colour palette for people with vision colour deficiency.

Open Issues:
- Should we include the silver robot?
- How should we change the rules of the game to only allow exactly four players, since the original game allows two or more players?