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.
2. The system receives the user's choice and provides the user with a set of options for choosing how many human players are playing, with options for 1 to 4 human players.
3. The user informs the system about their desired number of human and computer players.
4. The system records the number of human players and sets the appropriate type (either human or computer) for each of the players.
5. The system prompts the user to select a difficulty level, either easy or hard. The system also provides an option to enable colour vision assistance.
6. The user chooses a difficulty level and informs the system of their choice. The user ignores the option of enabling colour vision assistance. [Alt 1: The user enables colour vision assistance]
7. The system records the user's selection for the difficulty level and records that colour vision assistance is disabled as desired.
8. The system displays a game board that has target spaces, barriers, and colour markers on it in their default colours.

9. The system places each robot on the colour marker that matches their colour.
10. The system is prepared for the game to start and the use case ends.

Alternative Flows:

Alt 1: The user enables colour vision assistance

1. The system records the user's selection for the difficulty level and records that colour vision is enabled as desired.
2. The system displays a game board that has target spaces, barriers, and colour markers on it. The target spaces have different colours and symbols than the default that are accessible to people with colour vision deficiency.
3. The system sets the colour of the robots to different colours than the default that are accessible to people with colour vision deficiency.
4. Flow resumes at Main Success Scenario Step 9.

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 an option other than to start a new game 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?