

Use case name: “Set up a game”

Primary Actor: User(s)

Stakeholders and Interests:

- *The User(s)*: When setting up a new game, the user(s) wants to easily observe the output of the game setup including the board (either simple or complex), the difficulty (either easy or hard), the robot pieces, and the target squares.

-Game is designed for children so want set up to be implemented with a simple push of a button or selection of “New Game”.

Preconditions:

- The user should be presented with the option to play by starting a new game or loading a saved version.

Success Guarantee (Post-conditions):

-On setting up a new game, the board must be assembled so that there is 4 different sections (red, green, blue, and yellow) and each of the 4 robot pieces must be placed on the board randomly such that none of the pieces are placed on a target square. Each player should start the game with 0 points.

Main Success Scenario:

1. The user(s) requests new game initialization, enters number of user players (if less than 4, computer players will also play)
2. The board is properly displayed with 4 sections, 4 robots pieces randomly placed, and 17 target squares randomly placed.

Alternate Flows:

Alt 1: Loading a saved game

1. When loading a saved game, all conditions will already be guaranteed. Use case ends.

Alt 2: Resetting the game

2. At any point, the user can reset the game to a new random configuration. Use case ends.

Exceptions:

-If at the start up any of the postconditions are not met, the user will be prompted to start a new game.

Special Requirements:

-Colors for the board, robot pieces, and target squares must be selected to cater to users with color vision deficiency and in such a manner that it is evident that all 4 robot pieces are a distinct color.

-If user choose complex board setup, must add diagonal road blocks with different rules depending on the color.

Open Issues:

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- what is the best way to start a new game for those with color deficiency?

- what will be the main difference between easy and hard modes?