COMP 2005 – Group 2

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):

-The user sets the number of non-computer players (max of 4).

-If the user chooses less than 4 non-computer players, the rest of the players are set up as computer players and each computer player is initialized with a different name (i.e. Computer1, Computer2..).

-The user selects computer players difficulty (easy or hard).

-On setting up a new game, the game board is initialized based on the users selection of “simple” or “complex”. The board must be assembled so that there is 4 different sections 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 and a robot piece.

Main Success Scenario:

1. The user(s) requests to start a new game *[Alt 1: The user chooses to load a saved game, exit the game]*
2. The system gives the user the options for type of board, the difficulty of the computer players, and the number of human players
3. The user selects which type of board they will use (simple o**r** complex)
4. The system records this choice
5. The user selects the number of non-computer players (always 4 players, if less than 4 non-computer players than computer players will fill in the rest)
6. The system records the number of human players
7. The user selects the difficulty of the computer players
8. The system records the difficulty the user picks
9. The system asks the user to confirm their selections
10. The user confirms the selections
11. The system initializes the type of board the user requested, generates a number of computer players based on how many human players the user added, and bases the computer players’ difficulty off the level of difficulty the user selected
12. The system initializes each player’s total points to 0.

13. The system initializes the game board with 4 sections, 4 robots pieces randomly placed, and 17 target squares randomly placed. Each robot piece is associated with a player. *[Alt 3: The user decides to reset the game. Use case ends]*

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: Exit the game

At any point, the user can exit the game. Use case ends.

Alt 3: Resetting the game

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

Exceptions:

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

Special Requirements:

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

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

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?