FULLY DRESSED USE CASE DESCRIPTIONS (GROUP 8)

Description 1: SET UP A GAME

Primary Actors: User, AI

Stakeholders and Interests:

- Users- The objective is to be able to select the game board, their pawn, learn about how to play the game and setting up the game in general.
- Group 8 Members: Designing and executing a top-notch version of the Quoridor game within given time constraints.

Pre-conditions:

There is at least one human player and the game has been configured for play.

Post-conditions:

Players are aware of the difficulty chosen. Players are aware of how many human and computer players are playing.

Main Success Scenario:

1. The system asks the user to either start a new game or load a previous game [Alt1].
2. The user can also choose from 'How to Play' [Alt2] or 'Settings' [Alt3].
3. The system takes the input and opens the next window; old game data will be hidden.
4. The user is asked to choose the number of players playing the game, and select a color palette for the play experience. If any AI, player will be asked to choose difficulty.
5. The system then randomly selects a color for the user based on the color palette selected.
6. The system prompts user to enter their name, as well as the name of any other human player they intend to play with.
7. The user selects Start to continue to the game.
8. The system validates all the selections made above and creates the game.

Alternate Flow:

Alt1- If the user chooses to load a previous game, then the program loads one with all the original data. Use case ends.

Alt2- If the user chooses 'How to Play', then the entire set of rules is displayed. Use case ends.

Alt3- If the user chooses 'Settings', then an inside settings window is opened, and the user can now choose game colors for their pawns from three variety of options.

Special Requirements:

- Colours of game display and size of text fonts used must cater the need of users with colour vision deficiency.
- Confirmation of saving game (or reason to failure) would be provided to user within 5 seconds of clicking the button.

Exceptions:

- If the system cannot recover the gameboard or the user's input at any time, the system tells the user that there is an issue and leaves the game. Use case ends.

Open Issues:

- If the user selects Load Game, but there aren't any previously saved games?

Description 2: TAKE A TURN

Primary Actors: User, AI

Stakeholders and Interests:

- Users- The objective is to be the first player to move their pawn to any space on the opposite side of the gameboard from which it begins.

Pre-conditions:

The game settings have been predefined by the user. Game has been started, and is ready to play.

Post-conditions:

The players are aware of each move that is made legally on the game board; each player's turn in updated.

Main Success Scenario:

1. The game starts with the four pawns placed at opposite edges (in middle tile) of the board.
2. When the turn arrives, each player has an option of either moving his pawn or placing a fence/wall.
3. The pawns move on to any adjacent horizontal or vertical space including backwards or forward, except for the case in face to face collision [Alt 1, Alt 2].
4. The user selects which direction it would like its pawn to move.
5. The system checks to ensure that move made was legal [Alt 3]
6. The program moves the pawn, updates the gameboard and displays whose turn it is next.
7. The fences should be placed between 2 sets of squares.

8. Each player gets 5 fences each and say they used up all their fences, then they have to move their pawn.
9. The first player to reach the opposite row from their starting row is declared the winner.

Alternate Flow:
Alt 1- In case of a face to face collision between the two pawns, which are not separated by a fence, the player whose turn it is can jump over the opponent's pawn, thus advancing an extra square.

Alt 2- The user is collided with two other opponents; it is not allowed to jump over two pawns.

Alt 3- An illegal move was made; system tells the user to move again.

Special Requirements:

- Colours of game display and size of text fonts used must cater the need of users with colour vision deficiency.
- The system lets the user move the pawn only horizontally and vertically.
- If the player is an AI, it does it's placing of walls and moving automatically according to the rules of the game.

Exceptions:

- Unless a game can be loaded, saved, or resumed by the machine. The device will inform the user of the error and leave the game.

Open Issues:

- The user is given the option to add or remove players later in the game.