

INTRODUCTION

The project is a game named Ricochet Robots. Its an interactive game where the motive is to find the shortest way to reach a target.

PROBLEM STATEMENT

This is a game which tests the strategic skills of the players, currently there aren't any known version of the game that has been implemented on a digital platform.

This game ensures that it provides the users a platform to test their skills without the requirement of a physical board.

This game is highly dependent on the use of different colors to indicate the robots belonging to each player and the targets they aim to land their robots on. Currently there exists no versions for color impaired users, this project focuses on a version of the game that is specifically designed with this issue in mind. Using different shapes and shades of grey to illustrate robots, board and different moves as well.

STAKEHOLDERS AND KEY INTERESTS

STAKEHOLDERS	Key Interests
Users	Start the game, choose difficulty, choose the board, view points tally.
Marketing	Make sure that the game is appealing, distribute the game and make sure it is a success
Maintenance	Ensure the smooth running of the game and that it is free of bugs. There is a possibility of this being an online game, so it would require regular maintenance.
Color Impaired Users	Different shaped robots to identify which one is theirs. Board and deflectors are not colored and instead are differentiated by different shades of grey. Still the same rules so the fun remains intact.

SUMMARY OF SYSTEM FEATURES

The user shall be able to choose the type of board: simple or complex. Four players are required to start the game, the control of the robot not controlled by a player goes to the computer.

The game shall ask the user to choose the difficulty of the computer players: easy or hard.

Once the game starts, the game shall choose a target square of one of the four colors randomly. The players shall be able to have the ability to choose the number of moves in which they believe they can reach the target. The player with the least number of moves selected gets the opportunity of demonstrating it to the other players. If he is successful, his points tally increases, if not, the player with the second least number selected gets to try.

The game contains barriers which deflects the robots into different directions.

A robot stops moving when it reaches the walls of the board or hits a barrier. The “hard” game mode contains deflectors that are diagonal and instead of stopping the robots, it changes the direction in which the robots are moving. A robot with the same color as the deflector goes through and does not get deflect.

The game shall end when one player has 5 points.

The game shall also be able to have a version for color impaired users, where instead of colors, the game has different shapes and shades of grey.

PROJECT RISKS

Fully and correctly constructing the game and the design of two boards might prove difficult in the time available due to the number of patterns and types of moves possible.

Making sure that the computer makes legal moves and the best moves when the hard difficulty is chosen.

Using different shades of grey and implement it to the game to make sure there is a version available for color impaired users might be challenging.