**Report**

1. **Game rules**

**1.1 Board Setup:**

- Hexagonal grid of size 9x9.

- Two players, traditionally colored red and blue.

- Player 1's goal is to connect the top and bottom sides, while Player 2's goal is to connect the left and right sides.

**1.2 Objective:**

- Form a path of your pieces connecting the opposing sides of the board marked by your colors before your opponent does.

**1.3 Playing the Game:**

- Starting: Player 1 (usually red) begins by placing a piece anywhere on the board.

- Turns: Players alternate turns, placing one piece on any unoccupied space.

- Swap Rule: After Player 1's first move, Player 2 may either place a piece or change the color of Player 1's first piece to their own color.

- Immutability: Once placed, pieces cannot be moved or removed.

**1.4 Winning the Game:**

- The game ends when one player connects their two sides.

- Draws are impossible: the board will eventually fill, and it is impossible for both players to complete their paths simultaneously.

- If the board is filled and one player has not connected their path, the other player must have done so.

1. **Class diagrams**



