

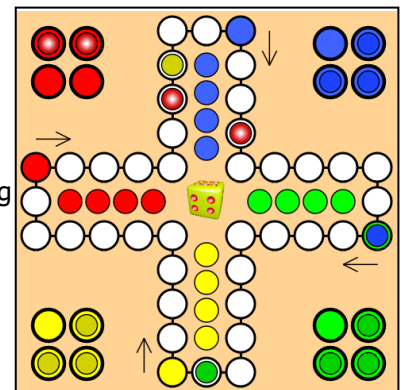
Project: Ludo

General Information

Ludo is a board game with 4 players. One player is controlled by the user and other 3 players are controlled by the computer. Each player controls four pieces, or pawns. Initially, each pawn is located on their home field. The aim is to bring these 4 pieces away from the home field into the safety of the target field as quickly as possible. The first player whose targeted field is full with his pawns wins the game.

Game Elements

- 4 players
 - Player1, Player2, Player3, Player4
- 16 pawns
 - A, B, C, D for Player1 (user)
 - E, F, G, H for Player2 (computer)
 - I, J, K, L for Player3 (computer)
 - M, N, O, P for Player4 (computer)
- 4 starting points, one for each player
- 4 home fields where the pawns of each player are located in the beginning
- 4 target fields where each player should place their pawns at the end
- Rewards along the path from starting point to the target field
 - **3** * Go 3 steps forward (">")
 - **2** * Play one more time (">")
- Penalties along the path from starting point to the target field
 - **3** * Go 3 steps back ("<")
 - **2** * Wait for one round without playing ("<")
 - **1** * Go back to the starting point ("X")



Game Initialization

Rewards and penalties are placed on the board randomly at the beginning of the game. Rewards and penalties cannot be located on the starting points.

Pawns of each player are located in their home fields.

Game Start

Player1 begins the game. The players alternate turns in a clockwise direction.

To start moving across the board, a player must roll a six so that a pawn can be put into the starting point of this player. Everyone gets one chance to roll a six, and if they don't get a six, it becomes the next player's turn.

During Game

A dice is thrown again to move a pawn. You must follow the number that is thrown in a clockwise direction. Along the path, randomly placed rewards and penalties are found. Player should perform these operations when a pawn is located on one of these points.

You can capture an opponent's pawn anytime you land on top of one of their pawns. The pawn that is captured goes back to the corresponding player's home field. That player then has to roll a six in order to get their pawn out.

To land in the "target field" section, player needs to roll the exact number, otherwise he/she waits for the next round. If all of the points in the target field are full with pawns, then the player finishes the game. The first player whose targeted field is full with pawns wins the game.

Exceptional Rules

- More than one pawn in the same point along the game path is not allowed.
- If a player rolls a six, then the player can choose to place another pawn out of a home field or move a pawn inside the game path. The player continues to play as long as he/she rolls a six.

Sample Game

<div>Player 1</div> <div>A B C D + - - +</div> <div>+ - - + . (</div> <div> . B . o . E F </div> <div> C D . o . G H </div> <div>+ - - + . o > + - - +</div> <div>) o . </div> <div>+ - - - + . # . + - - - +</div> <div> . . . (. . . # . . .) < . </div> <div> . o o o o # # # # o o o o . </div> <div> > # . . < . X </div> <div>+ - - - - + . # . + - - - - +</div> <div> (o . </div> <div>+ - - + . o . + - - +</div> <div> M N . o) I J </div> <div> O P . o . K L </div> <div>+ - - + . . . + - - +</div> <div>M N O P + - - - + I J K L</div> <div>Player 4</div> <div>Player 3</div>	<div>Round: 1</div> <div>Turn: Player 1</div> <div>Dice: 6</div> <div>Enter Pawn: A</div>	
<div>Player 1</div> <div>A B C D + - - +</div> <div>+ - - + . (</div> <div> . B . o . E F </div> <div> C D . o . G H </div> <div>+ - - + . o > + - - +</div> <div>) o . </div> <div>+ - - - + . # . + - - - +</div> <div> . . . (. . . # . . .) < . </div> <div> . o o o o # # # # o o o o . </div> <div> > # . . < . X </div> <div>+ - - - - + . # . + - - - - +</div> <div> (o . </div> <div>+ - - + . o . + - - +</div> <div> M N . o) I J </div> <div> O P . o . K L </div> <div>+ - - + . . . + - - +</div> <div>M N O P + - - - + I J K L</div> <div>Player 4</div> <div>Player 3</div>	<div>Round: 1</div> <div>Turn: Player 2</div> <div>Dice: 5</div>	
<div>Player 1</div> <div>A B C D + - - +</div> <div>+ - - + . (</div> <div> . B . o . E F </div> <div> C D . o . G H </div> <div>+ - - + . o > + - - +</div> <div>) o . </div> <div>+ - - - + . # . + - - - +</div> <div> A . . . (. . . # . . .) < . </div> <div> . o o o o # # # # o o o o . </div> <div> > # . . < . X </div> <div>+ - - - - + . # . + - - - - +</div> <div> (o . </div> <div>+ - - + . o . + - - +</div> <div> M N . o) I J </div> <div> O P . o . K L </div> <div>+ - - + . . . + - - +</div> <div>M N O P + - - - + I J K L</div> <div>Player 4</div> <div>Player 3</div>	<div>Round: 1</div> <div>Turn: Player 1</div> <div>Dice: 3</div> <div>Enter Pawn: A</div> <div>Extra 3 steps</div>	<div>Round: 1</div> <div>Turn: Player 3</div> <div>Dice: 4</div> <div>No legal move!</div>
<div>Player 1</div> <div>A B C D + - - +</div> <div>+ - - + . (</div> <div> . B . o . E F </div> <div> C D . o . G H </div> <div>+ - - + . o > + - - +</div> <div>) o . </div> <div>+ - - - + . # . + - - - +</div> <div> A . . . (. . . # . . .) < . </div> <div> . o o o o # # # # o o o o . </div> <div> > # . . < . X </div> <div>+ - - - - + . # . + - - - - +</div> <div> (o . </div> <div>+ - - + . o . + - - +</div> <div> M N . o) I J </div> <div> O P . o . K L </div> <div>+ - - + . . . + - - +</div> <div>M N O P + - - - + I J K L</div> <div>Player 4</div> <div>Player 3</div>	<div>Round: 1</div> <div>Turn: Player 2</div> <div>Dice: 6</div>	<div>Round: 1</div> <div>Turn: Player 4</div> <div>Dice: 2</div> <div>No legal move!</div>
<div>Player 1</div> <div>A B C D + - - +</div> <div>+ - - + . (</div> <div> . B . o . E F </div> <div> C D . o . G H </div> <div>+ - - + . o > + - - +</div> <div>) o . </div> <div>+ - - - + . # . + - - - +</div> <div> . . . (. . . # . . .) < . </div> <div> . o o o o # # # # o o o o . </div> <div> > # . . < . X </div> <div>+ - - - - + . # . + - - - - +</div> <div> (o . </div> <div>+ - - + . o . + - - +</div> <div> M N . o) I J </div> <div> O P . o . K L </div> <div>+ - - + . . . + - - +</div> <div>M N O P + - - - + I J K L</div> <div>Player 4</div> <div>Player 3</div>	<div>Round: 1</div> <div>Turn: Player 2</div> <div>Dice: 3</div> <div>Play one more time</div>	<div>Round: 2</div> <div>Turn: Player 1</div> <div>Dice: 6</div> <div>Enter Pawn: D</div>