Quoridor

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I. Algorithm

The player employs a Minimax Search with Alpha Beta Pruning of depth 2. We haven't been able to search deeper given the time constraints, so that's one area where we would want to improve.

II. Implementation

The game has been modelled as a graph with edges between two points on the grid being a boolean. All necessary checks are made to ensure a valid move is played.

III. Evaluation Function

A crude evaluation function has been used for the purpose of this assignment. The weights have been chosen somewhat arbitrarily and we did not get the time to implement learning of coefficients. Our evaluation function takes into consideration

- the shortest distance to goal
- the difference of the shortest distances of both players to goal
- makes walls more expensive in the beginning of the game
- tries not to use a lot more walls than the opponent.

Discussed with Akshay Gupta, Shreyas Padhy and Kabir Chhabra.