Quoridor

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We have implemented Minimax algorithm with alpha beta pruning for the AI of Quoridor. BFS was used for the shortest path calculation.

Our algorithm deals each state as a move w.r.to its parent thus effeciently passing the state as an argument to the parent. After the Minimax on child returns the state is backtracked to that of parent. Oscillations are dealt by storing the previous moves in a queue and giving a negative weight to the state. Thus other states are preferred instead of this state.

Evaluation function consits of shortest distance from the goal of AI and of opponent , number of walls of AI and of the opponent , and huge penalities/incentive for reaching the goal state. The coefficients of each parameter are constant.

We have discussed the effecient implimentation of state and action in Minimax algorithm with Shubham Rai and BVS Ujwal.