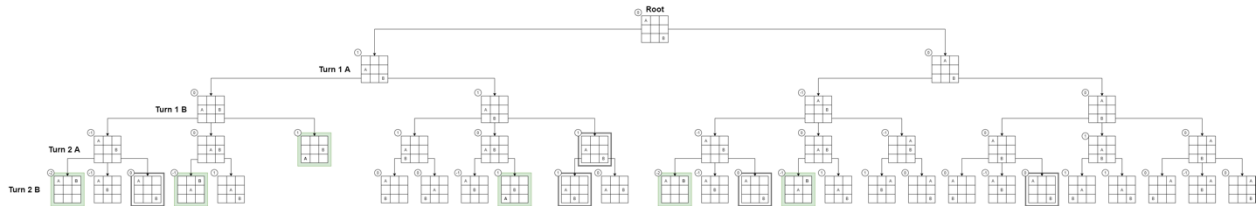
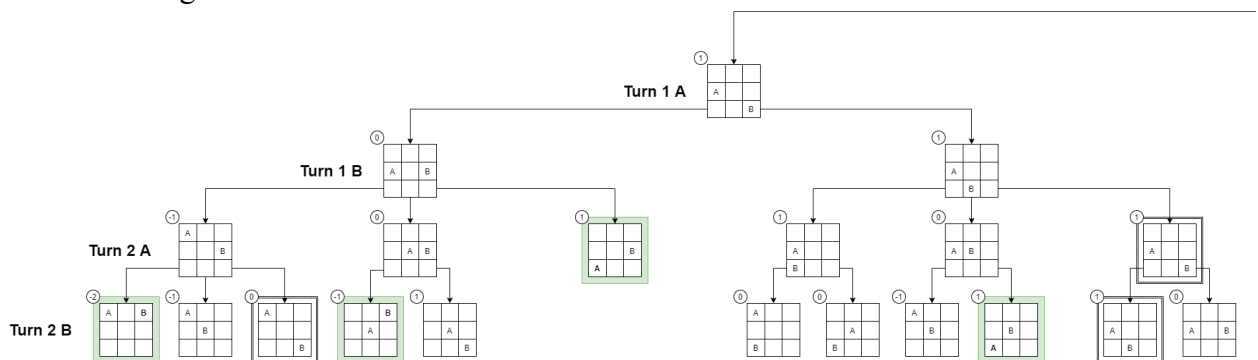


Search in Games Homework

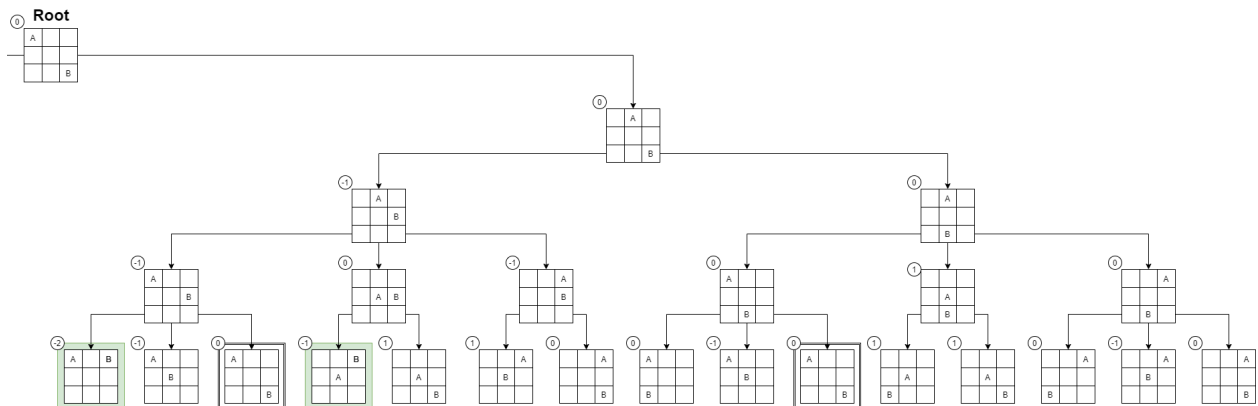
Search Diagram for 4 turns



Left branching zoomed:



Right branching zoomed:



If the game were to continue until one player reached the end, the standard minimax would fail due to the potential to get stuck in a recursive loop. Since there are some repeating constates as you go down the state tree. The game tree would need to be modified to account for these loop scenarios. One possible modification to solve the problem of infinite looping could be recursively checking back up the tree and terminating the game if the current node matching an already searched state.

True or False:

1. **True.** In a fully observable game each player already knows the possible moves either can make, and theoretically predict all future moves based on the games current state. Thus there is no advantage to knowing the opposing player's next move
2. **False.** In a partially observable game all the possible states are not known to the players. Knowing a future state of the opposing player would be advantageous to the first player in forming a next move strategy. Eg. Peeking over at your friends cards during poker could help you decide if they will hit or fold, and weather your hand would win.
3. **False.** Backgammon is a partially observable game so even a perfectly rational agent may still lose due to chance.