

What's the purpose of the minimax function?

Minimax is basically how the computer picks its moves. It checks every possible option it can take and simulates what could happen next. If the move leads to a win, it gets a good score. If it leads to a loss, a bad score. Then it just chooses the move with the best outcome. It's kind of like the computer trying to play perfectly.

How does the Game State class work like a tree?

So every Game State is like a snapshot of the board. When a move is made, it creates a new Game State with that move. That's like going one level deeper in a tree of game outcomes. The minimax function keeps generating new Game States by trying all the available moves and going down each path.

When does minimax stop calling itself?

It stops when the game ends. So, either someone wins, or the board is full (which means a draw). Once it hits that point, it just returns a score and doesn't go any deeper.

By working on this assignment, I learned how recursion explores all possible game outcomes using a tree structure. The AI was smart and played perfectly using minimax, but the problem it had was it had no personality or adaptability. If I had more time, I'd add difficulty settings, better user input handling, and maybe animations or sound for a more fun experience. Overall, this was an interesting assignment to work on