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CS 380: Artificial Intelligence

2018/06/06

In this assignment, I defined Win function to system to know when x or o has won the game. However, I had trouble completing heuristics for the assignment. In theory, the algorithm will utilize minimax recursively to find which moves are the best move for the player or computer defends on the score. Following was the pseduo minimax:

```python
def minimax(Player, Board):
    res = Win (Player, Board)
    if res == False:
        for i in alphabeta(Player, Board):
            val = minimax(Player, Board, alpha, beta)

        if player == 0:
            if val > best:
                best = val
        else:
            if val < best:
                best = val
        return best

def alphabeta(Player, Board, alpha, beta):
    if getStatus(Player, Board) == False:
        for move in getScore():
                Move(move, Player)
                val = alphabeta(Player,Board , alpha, beta)
                move(move, None)
                if player == 0:
                        if val > alpha:
                                alpha = val
                        if alpha >= beta:
                                return beta
                else:
                        if val < beta:
                                beta = val
                        if beta <= alpha:
                                return alpha
    if player == 0:
        return alpha
    else:
        return beta
```