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class TicTacToe:  
    def __init__(self):  
        self.board = [' '] * 9  
        self.current_player = 'X'  
  
    def print_board(self):  
        for i in range(0, 9, 3):  
            print("|".join(self.board[i:i + 3]))  
            if i < 6:  
                print("----")  
  
    def is_winner(self, player):  
        # Rows  
        for i in range(0, 9, 3):  
            if all(self.board[j] == player for j in range(i, i + 3)):  
                return True  
  
        # Columns  
        for i in range(3):  
            if all(self.board[j] == player for j in range(i, 9, 3)):  
                return True  
  
        # Diagonals  
        if all(self.board[i] == player for i in [0, 4, 8]):  
            return True  
        if all(self.board[i] == player for i in [2, 4, 6]):  
            return True  
  
        return False  
  
    def is_full(self):  
        return ' ' not in self.board  
  
    def is_game_over(self):  
        return self.is_winner('X') or self.is_winner('O') or self.is_full()  
  
    def get_available_moves(self):  
        return [i for i, v in enumerate(self.board) if v == ' ']  
  
    def make_move(self, move):  
        self.board[move] = self.current_player  
        self.current_player = 'O' if self.current_player == 'X' else 'X'  
  
    def undo_move(self, move):  
        self.board[move] = ''  
        self.current_player = 'O' if self.current_player == 'X' else 'X'  
  
    def minimax(board, maximizing_player):  
        if board.is_game_over():  
            if board.is_winner('X'):  
                return -1  
            elif board.is_winner('O'):  
                return 1  
            else:  
                return 0  
        if maximizing_player:  
            best_value = float('-inf')  
            for move in board.get_available_moves():  
                new_board = board.copy()  
                new_board.make_move(move)  
                value = minimax(new_board, False)  
                if value > best_value:  
                    best_value = value  
            return best_value  
        else:  
            best_value = float('inf')  
            for move in board.get_available_moves():  
                new_board = board.copy()  
                new_board.undo_move(move)  
                value = minimax(new_board, True)  
                if value < best_value:  
                    best_value = value  
            return best_value
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        return 1
    else:
        return 0

if maximizing_player:
    max_eval = float('-inf')
    for move in board.get_available_moves():
        board.make_move(move)
        eval = minimax(board, False)
        board.undo_move(move)
        max_eval = max(max_eval, eval)
    return max_eval
else:
    min_eval = float('inf')
    for move in board.get_available_moves():
        board.make_move(move)
        eval = minimax(board, True)
        board.undo_move(move)
        min_eval = min(min_eval, eval)
    return min_eval

def get_best_move(board):
    best_move = None
    best_eval = float('-inf')

    for move in board.get_available_moves():
        board.make_move(move)
        eval = minimax(board, False)
        board.undo_move(move)

        if eval > best_eval:
            best_eval = eval
            best_move = move

    return best_move

# =====
# Play the Game
# =====

game = TicTacToe()

while not game.is_game_over():
    game.print_board()

    if game.current_player == 'X':
        try:
            move = int(input("Enter your move (0-8): "))
        except ValueError:
            print("Invalid input! Enter a number 0-8.")
            continue

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if move not in game.get_available_moves():
    print("Invalid move! Try again.")
    continue
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