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1 def print_board(board):
2     for row in board:
3         print(" | ".join(row))
4         print("-" * 17)
5
6 def is_winner(board, player):
7     # Check rows, columns, and diagonals for a win
8     for i in range(3):
9         if all(board[i][j] == player for j in range(3)
10            ) or all(board[j][i] == player for j in range(3)):
11             return True
12         if all(board[i][i] == player for i in range(3))
13         or all(board[i][2 - i] == player for i in range(3)):
14             return True
15     return False
16
17 def is_board_full(board):
18     return all(board[i][j] != " " for i in range(3)
19        for j in range(3))
20
21 def get_empty_cells(board):
22     return [(i, j) for i in range(3) for j in range(3)
23        if board[i][j] == " "]
24
25 def minimax(board, depth, maximizing_player):
26     if is_winner(board, "O"):
27         return 1
28     elif is_winner(board, "X"):
29         return -1
30     elif is_board_full(board):
31         return 0
32
33     if maximizing_player:
34         max_eval = float("-inf")
35         for i, j in get_empty_cells(board):
36             board[i][j] = "O"
37             eval = minimax(board, depth + 1, False)
38             board[i][j] = " "
39             max_eval = max(max_eval, eval)
40         return max_eval
41     else:

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38         min_eval = float("inf")
39         for i, j in get_empty_cells(board):
40             board[i][j] = "X"
41             eval = minimax(board, depth + 1, True)
42             board[i][j] = " "
43             min_eval = min(min_eval, eval)
44         return min_eval
45
46 def get_best_move(board):
47     best_move = None
48     best_eval = float("-inf")
49     for i, j in get_empty_cells(board):
50         board[i][j] = "O"
51         eval = minimax(board, 0, False)
52         board[i][j] = " "
53         if eval > best_eval:
54             best_eval = eval
55             best_move = (i, j)
56     return best_move
57
58 def play_game():
59     board = [[" " for _ in range(3)] for _ in range(3)]
60
61     while True:
62         print_board(board)
63
64         # Player's move
65         row = int(input("Enter the row (0, 1, or 2
66 ): "))
67         col = int(input("Enter the column (0, 1, or 2
68 ): "))
69         if board[row][col] == " ":
70             board[row][col] = "X"
71         else:
72             print("Invalid move. Try again.")
73             continue
74
75         if is_winner(board, "X"):
76             print_board(board)
77             print("You win!")
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76         break
77     elif is_board_full(board):
78         print_board(board)
79         print("It's a draw!")
80         break
81
82     # AI's move
83     print("AI is thinking...")
84     ai_row, ai_col = get_best_move(board)
85     board[ai_row][ai_col] = "0"
86
87     if is_winner(board, "0"):
88         print_board(board)
89         print("AI wins!")
90         break
91     elif is_board_full(board):
92         print_board(board)
93         print("It's a draw!")
94         break
95
96 if __name__ == "__main__":
97     play_game()
98
99
100
101
```