EXP 2
Vignesh RK
9551
TE COMPS A

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import random

def print_board(board):
    for row in board:
        print(' '.join(row))
    print()

def check_winner(board, player):
    for i in range(3):
        if all(board[i][j] == player for j in range(3)) or all(board[j][i] == player
for j in range(3)):
            return True
    if all(board[i][i] == player for i in range(3)) or all(board[i][2 - i] == player
for i in range(3)):
        return True
    return False

def evaluate(board):
    if check_winner(board, 'X'):
        return -1  # Player X wins
    elif check_winner(board, 'O'):
        return 1   # Player O wins
    else:
        return 0   # It's a draw

def is_board_full(board):
    return all(board[i][j] != ' ' for i in range(3) for j in range(3))

def get_available_moves(board):
    return [(i, j) for i in range(3) for j in range(3) if board[i][j] == ' ']

def get_best_move(board):
    magic_square = [[2, 7, 6], [9, 5, 1], [4, 3, 8]]
    best_move = None
    best_score = float('-inf')

    for move in get_available_moves(board):
        i, j = move
        score = magic_square[i][j]
        if score > best_score:
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            best_score = score
            best_move = move

    return best_move

def main():
    board = [[' ' for _ in range(3)] for _ in range(3)]
    game_end = False

    print('Welcome to Tic-Tac-Toe!')

    while not game_end:
        print_board(board)

        # Player's turn
        player_move = tuple(map(int, input('Enter your move (row col): ').split()))
        if board[player_move[0]][player_move[1]] == ' ':
            board[player_move[0]][player_move[1]] = 'X'
        else:
            print('Invalid move. Try again.')
            continue

        # Check if the player wins
        if check_winner(board, 'X'):
            print_board(board)
            print('You win!')
            break

        # Check for a draw
        if is_board_full(board):
            print_board(board)
            print('It\'s a draw!')
            break

        # Computer's turn
        print('Computer\'s turn')
        computer_move = get_best_move(board)
        board[computer_move[0]][computer_move[1]] = 'O'

        # Check if the computer wins
        if check_winner(board, 'O'):
            print_board(board)
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            print('Computer wins!')
            break

        # Check for a draw again
        if is_board_full(board):
            print_board(board)
            print('It\'s a draw!')
            break

if __name__ == "__main__":
    main()
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Output:

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/usr/local/bin/python3 /Users/vigneshrk/Desktop/ai/exp2.py
vigneshrk@Vigneshs-MacBook-Air ai % /usr/local/bin/python3 /Users/vigneshrk/Desktop/ai/exp2.py
Welcome to Tic-Tac-Toe!



Enter your move (row col): 2 0
Computer's turn

  O
X

Enter your move (row col): 1 1
Computer's turn

O X
X   O

Enter your move (row col): 1 2
Computer's turn
  O
O X X
X   O

Enter your move (row col): 0 2
  O X
O X X
X   O

You win!
vigneshrk@Vigneshs-MacBook-Air ai %
```