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# Tic-Tac-Toe Game in Python

# Function to print the game board
def print_board(board):
    print("\n")
    for row in board:
        print("|".join(row))
        print("-" * 5)
    print("\n")

# Function to check for a winner
def check_winner(board, player):
    # Check rows, columns, and diagonals
    for row in board:
        if all([cell == player for cell in row]):
            return True

    for col in range(3):
        if all([board[row][col] == player for row in range(3)]):
            return True

    if board[0][0] == player and board[1][1] == player and board[2][2] == player:
        return True

    if board[0][2] == player and board[1][1] == player and board[2][0] == player:
        return True

    return False

# Function to check if the board is full (for a tie)
def is_board_full(board):
    return all([cell != ' ' for row in board for cell in row])

# Function to handle player moves
def player_move(board, player):
    while True:
        try:
            move = int(input(f"Player {player}, enter your move (1-9): ")) - 1
            if move < 0 or move >= 9:
                raise ValueError

            row, col = divmod(move, 3)
            if board[row][col] == ' ':
                board[row][col] = player
                break
            else:
                print("This spot is already taken. Try again.")
        except ValueError:
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        print("Invalid input. Enter a number between 1 and 9.")

# Main function to play the game
def play_game():
    board = [[' ' for _ in range(3)] for _ in range(3)]
    current_player = 'X'
    game_over = False

    print("Welcome to Tic Tac Toe!")
    print("Player X goes first.")
    print("Enter a number between 1-9 to make your move (1 is top-left and 9 is bottom-right).")

    print_board(board)

    while not game_over:
        player_move(board, current_player)
        print_board(board)

        if check_winner(board, current_player):
            print(f"Player {current_player} wins!")
            game_over = True
        elif is_board_full(board):
            print("It's a tie!")
            game_over = True
        else:
            current_player = 'O' if current_player == 'X' else 'X'

# Start the game
if __name__ == "__main__":
    play_game()

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Player X, enter your move (1-9): 1

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X| |
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| |

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Player X, enter your move (1-9): 4

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x|0|  
-----  
x| |  
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| |  
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Player O, enter your move (1-9): 5

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x|0|  
-----  
x|0|  
-----  
| |  
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Player X, enter your move (1-9): 7

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x|0|  
-----  
x|0|  
-----  
x| |  
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Player X wins!

