

TIC TAC TOE PROBLEM

```
def print_board(board):
    for row in board:
        print(" | ".join(row))
        print("-----")

def check_winner(board):
    for row in board:
        if row[0] == row[1] == row[2] != " ":
            return True
    for col in range(3):
        if board[0][col] == board[1][col] == board[2][col] != " ":
            return True
    if board[0][0] == board[1][1] == board[2][2] != " ":
        return True
    if board[0][2] == board[1][1] == board[2][0] != " ":
        return True
    return False

def is_full(board):
    for row in board:
        if " " in row:
            return False
    return True

def tic_tac_toe():
    print("Welcome to Tic Tac Toe!")
    board = [[" " for _ in range(3)] for _ in range(3)]
    print_board(board)
    current_player = "X"
    while True:
        try:
            row, col = map(int, input(f"Player {current_player}, enter your move (row and column:
1 1 for top-left): ").split())
            if row < 1 or row > 3 or col < 1 or col > 3:
                print("Invalid position! Enter numbers between 1 and 3.")
                continue
            if board[row - 1][col - 1] != " ":
                print("Cell already taken! Try again.")
                continue
            board[row - 1][col - 1] = current_player
            print_board(board)
            if check_winner(board):
                print(f"Player {current_player} wins! ")
                break
            if is_full(board):
                print("It's a tie! ")
```

```

        break
    current_player = "O" if current_player == "X" else "X"
except ValueError:
    print("Invalid input! Enter row and column numbers separated by a space.")

```

tic_tac_toe()

OUTPUT

```

-----
0 |  | X
-----
Player O, enter your move (row and column: 1 1 for top-left): 1 2
0 | 0 | X
-----
X |  | 
-----
0 |  | X
-----
Player X, enter your move (row and column: 1 1 for top-left): 2 2
0 | 0 | X
-----
X | X | 
-----
0 |  | X
-----
Player O, enter your move (row and column: 1 1 for top-left): 2 3
0 | 0 | X
-----
X | X | 0
-----
0 |  | X
-----
Player X, enter your move (row and column: 1 1 for top-left): 3 2
0 | 0 | X
-----
X | X | 0
-----
0 | X | X
-----
It's a tie! 🧡

```

Welcome to Tic Tac Toe!

```
| | |
-----
| | |
-----
| | |
-----
```

Player X, enter your move (row and column: 1 1 for top-left): 1 3

```
| | |
-----
| | |
-----
| | |
-----
```

Player O, enter your move (row and column: 1 1 for top-left): 1 1

```
O | | |
-----
| | |
-----
| | |
-----
```

Player X, enter your move (row and column: 1 1 for top-left): 2 1

```
O | | |
-----
X | | |
-----
| | |
-----
```

Player O, enter your move (row and column: 1 1 for top-left): 3 1

```
O | | |
-----
X | | |
-----
O | | |
-----
```

Player X, enter your move (row and column: 1 1 for top-left): 3 3

```
O | | |
-----
X | | |
-----
O | | |
-----
```

Player O, enter your move (row and column: 1 1 for top-left): 1 2