```cpp
#include <iostream>
#include <vector>
using namespace std;

void printBoard(const vector<vector<char>>& board) {
    for (const auto& row : board) {
        for (char cell : row) {
            cout << cell << " ";
        }
        cout << endl;
    }
}

bool checkWin(const vector<vector<char>>& board, char player) {

    for (int i = 0; i < 3; ++i) {
        if ((board[i][0] == player && board[i][1] == player && board[i][2] == player) ||
            (board[0][i] == player && board[1][i] == player && board[2][i] == player)) {
            return true;
        }
    }

    if ((board[0][0] == player && board[1][1] == player && board[2][2] == player) ||
        (board[0][2] == player && board[1][1] == player && board[2][0] == player)) {
        return true;
    }

    return false;
}
```

```cpp
bool checkFull(const vector<vector<char>>& board) {
    for (const auto& row : board) {
        for (char cell : row) {
            if (cell == ' ')
                return false;
        }
    }
    return true;
}


int main() {
    vector<vector<char>> board(3, vector<char>(3, ' '));
    char currentPlayer = 'X';


    cout << "Welcome to Tic-Tac-Toe!\n";


    do {
        printBoard(board);


        int row, col;
        cout << "Player " << currentPlayer << ", enter your move (row and column): ";
        cin >> row >> col;


        if (row >= 0 && row < 3 && col >= 0 && col < 3 && board[row][col] == ' ') {
            board[row][col] = currentPlayer;
```

```cpp
            if (checkWin(board, currentPlayer)) {

                printBoard(board);

                cout << "Player " << currentPlayer << " wins!\n";

                break;

            }



            if (checkFull(board)) {

                printBoard(board);

                cout << "It's a tie!\n";

                break;

            }



            currentPlayer = (currentPlayer == 'X') ? 'O' : 'X';

        } else {

            cout << "Invalid move. Try again.\n";

        }

    } while (true);


    return 0;

}
```