

Created by: CPP Viewer

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

char board[3][3] = { {'1', '2', '3'}, {'4', '5', '6'}, {'7', '8', '9'} };
char currentMarker;
int currentPlayer;

void drawBoard() {
    cout << "\n";
    cout << " " << board[0][0] << " | " << board[0][1] << " | " << board[0][2] << "\n";
    cout << "---|---|---\n";
    cout << " " << board[1][0] << " | " << board[1][1] << " | " << board[1][2] << "\n";
    cout << "---|---|---\n";
    cout << " " << board[2][0] << " | " << board[2][1] << " | " << board[2][2] << "\n";
}

bool placeMarker(int slot) {
    int row = (slot - 1) / 3;
    int col = (slot - 1) % 3;

    if (board[row][col] != 'X' && board[row][col] != 'O') {
        board[row][col] = currentMarker;
        return true;
    } else {
        return false;
    }
}

int checkWinner() {
    // Check rows
    for (int i = 0; i < 3; i++) {
        if (board[i][0] == board[i][1] && board[i][1] == board[i][2]) {
            return currentPlayer;
        }
    }
}
```

```
}  
}
```

```
// Check columns  
for (int i = 0; i < 3; i++) {  
    if (board[0][i] == board[1][i] && board[1][i] == board[2][i]) {  
        return currentPlayer;  
    }  
}
```

```
// Check diagonals  
if (board[0][0] == board[1][1] && board[1][1] == board[2][2]) {  
    return currentPlayer;  
}  
if (board[0][2] == board[1][1] && board[1][1] == board[2][0]) {  
    return currentPlayer;  
}
```

```
// No winner  
return 0;  
}
```

```
void swapPlayerAndMarker() {  
    if (currentMarker == 'X') {  
        currentMarker = 'O';  
        currentPlayer = 2;  
    } else {  
        currentMarker = 'X';  
        currentPlayer = 1;  
    }  
}
```

```
void game() {  
    cout << "Player 1, choose your marker (X or O): ";  
    char markerP1;  
    cin >> markerP1;
```

```
currentPlayer = 1;
currentMarker = markerP1;
```

```
if (currentMarker == 'X') {
    currentMarker = 'X';
} else {
    currentMarker = 'O';
}
```

```
int winner = 0;
int slot;
```

```
for (int i = 0; i < 9; i++) {
    drawBoard();
    cout << "Player " << currentPlayer << ", enter your slot: ";
    cin >> slot;
```

```
if (slot < 1 || slot > 9) {
    cout << "Invalid slot! Please try again.\n";
    i--;
    continue;
}
```

```
if (!placeMarker(slot)) {
    cout << "Slot already occupied! Please try again.\n";
    i--;
    continue;
}
```

```
winner = checkWinner();
```

```
if (winner == 1) {
    drawBoard();
    cout << "Player 1 wins!\n";
```

```
break;  
} else if (winner == 2) {  
drawBoard();  
cout << "Player 2 wins!\n";  
break;  
}
```

```
swapPlayerAndMarker();  
}
```

```
if (winner == 0) {  
drawBoard();  
cout << "It's a tie!\n";  
}  
}
```

```
int main() {  
game();  
return 0;  
}
```