```cpp
1
2  #include <iostream>
3  using namespace std;
4
5  char board[3][3];
6  char currentPlayer;
7
8  // Initialize the game board with numbers 1-9
9  void initializeBoard() {
10     char value = '1';
11     for (int i = 0; i < 3; i++)
12         for (int j = 0; j < 3; j++)
13             board[i][j] = value++;
14 }
15
16 // Display the current game board
17 void displayBoard() {
18     cout << "\n";
19     for (int i = 0; i < 3; i++) {
20         cout << " ";
21         for (int j = 0; j < 3; j++) {
22             cout << board[i][j];
23             if (j < 2) cout << " | ";
24         }
25         cout << "\n";
26         if (i < 2) cout << "---|---|---\n";
27     }
28     cout << "\n";
29 }
30
31 // Switch current player
32 void switchPlayer() {
33     currentPlayer = (currentPlayer == 'X') ? 'O' : 'X';
34 }
35
36 // Make a move
37 bool makeMove(int position) {
38     int row = (position - 1) / 3;
39     int col = (position - 1) % 3;
40
41     if (board[row][col] != 'X' && board[row][col] != 'O') {
42         board[row][col] = currentPlayer;
43         return true;
44     } else {
45         return false;
46     }
47 }
48
49 // Check for a win
50 bool checkWin() {
51     for (int i = 0; i < 3; i++) {
52         // Check rows and columns
53         if ((board[i][0] == board[i][1] && board[i][1] == board[i][2]) ||
54             (board[0][i] == board[1][i] && board[1][i] == board[2][i]))
55             return true;
56     }
57     // Check diagonals
58     if ((board[0][0] == board[1][1] && board[1][1] == board[2][2]) ||
59         (board[0][2] == board[1][1] && board[1][1] == board[2][0]))
60         return true;
```

```clike
 61
 62        return false;
 63  }
 64
 65  // Check for a draw
 66  bool checkDraw() {
 67      for (int i = 0; i < 3; i++)
 68          for (int j = 0; j < 3; j++)
 69              if (board[i][j] != 'X' && board[i][j] != 'O')
 70                  return false;
 71      return true;
 72  }
 73
 74  // Main game loop
 75  void playGame() {
 76      int move;
 77      bool gameEnd = false;
 78      currentPlayer = 'X';
 79      initializeBoard();
 80
 81      while (!gameEnd) {
 82          displayBoard();
 83          cout << "Player " << currentPlayer << ", enter your move (1-9): ";
 84          cin >> move;
 85
 86          if (move < 1 || move > 9) {
 87              cout << "Invalid move! Try again.\n";
 88              continue;
 89          }
 90
 91          if (!makeMove(move)) {
 92              cout << "Spot already taken! Try again.\n";
 93              continue;
 94          }
 95
 96          if (checkWin()) {
 97              displayBoard();
 98              cout << "Player " << currentPlayer << " wins!\n";
 99              gameEnd = true;
100          } else if (checkDraw()) {
101              displayBoard();
102              cout << "The game is a draw!\n";
103              gameEnd = true;
104          } else {
105              switchPlayer();
106          }
107      }
108  }
109
110  int main() {
111      char playAgain;
112
113      do {
114          playGame();
115          cout << "Do you want to play again? (y/n): ";
116          cin >> playAgain;
117      } while (playAgain == 'y' || playAgain == 'Y');
118
119      cout << "Thanks for playing!\n";
120      return 0;
```

```
121  }
```