**TIC-TAC-TOE GAME**

**input:**

#include <iostream>

#include <vector>

using namespace std;

// Function to draw the Tic Tac Toe board

void drawBoard(const vector<char>& board) {

cout << " " << board[0] << " | " << board[1] << " | " << board[2] << endl;

cout << "-----------" << endl;

cout << " " << board[3] << " | " << board[4] << " | " << board[5] << endl;

cout << "-----------" << endl;

cout << " " << board[6] << " | " << board[7] << " | " << board[8] << endl;

}

// Function to check if a player has won

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

// Check rows

for (int i = 0; i < 3; i++) {

if (board[i] == player && board[i + 3] == player && board[i + 6] == player)

return true;

}

// Check columns

for (int i = 0; i < 9; i += 3) {

if (board[i] == player && board[i + 1] == player && board[i + 2] == player)

return true;

}

// Check diagonals

if (board[0] == player && board[4] == player && board[8] == player)

return true;

if (board[2] == player && board[4] == player && board[6] == player)

return true;

return false;

}

// Function to check if the board is full

bool checkFull(const vector<char>& board) {

for (char cell : board) {

if (cell == ' ')

return false;

}

return true;

}

int main() {

vector<char> board(9, ' '); // Initialize the board with empty cells

char currentPlayer = 'X';

int move;

cout << "Tic Tac Toe" << endl;

while (true) {

// Draw the board

drawBoard(board);

// Get the current player's move

cout << "Player " << currentPlayer << ", enter your move (1-9): ";

cin >> move;

move--;

// Validate the move

if (move < 0 || move >= 9 || board[move] != ' ') {

cout << "Invalid move! Try again." << endl;

continue;

}

// Make the move

board[move] = currentPlayer;

// Check if the current player has won

if (checkWin(board, currentPlayer)) {

cout << "Player " << currentPlayer << " wins!" << endl;

break;

}

// Check if the board is full (a tie)

if (checkFull(board)) {

cout << "It's a tie!" << endl;

break;

}

// Switch to the next player

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

}

// Draw the final board

drawBoard(board);

return 0;

}

**OUTPUT:**

**Tic Tac Toe**

**| |**

**-----------**

**| |**

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**| |**

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

**| |**

**-----------**

**X | |**

**-----------**

**| |**

**Player O, enter your move (1-9): 5**

**| |**

**-----------**

**X | O |**

**-----------**

**| |**

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