**TIC TAC TOE GAME IN C LANGUAGE**

#include <stdio.h>

#define SIZE 3

void initializeBoard(char board[SIZE][SIZE]);

void displayBoard(char board[SIZE][SIZE]);

int checkWin(char board[SIZE][SIZE]);

int checkDraw(char board[SIZE][SIZE]);

void makeMove(char board[SIZE][SIZE], int row, int col, char player);

int main() {

char board[SIZE][SIZE];

initializeBoard(board);

char player = 'X';

int row, col, gameStatus;

while (1) {

displayBoard(board);

printf("Player %c, enter your move (row and column): ", player);

scanf("%d %d", &row, &col);

if (row < 0 || row >= SIZE || col < 0 || col >= SIZE || board[row][col] != ' ') {

printf("Invalid move! Try again.\n");

continue;

}

makeMove(board, row, col, player);

gameStatus = checkWin(board);

if (gameStatus == 1) {

displayBoard(board);

printf("Player %c wins!\n", player);

break;

} else if (gameStatus == 0 && checkDraw(board)) {

displayBoard(board);

printf("The game is a draw!\n");

break;

}

// Switch players

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

}

return 0;

}

// Function to initialize the board

void initializeBoard(char board[SIZE][SIZE]) {

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

for (int j = 0; j < SIZE; j++) {

board[i][j] = ' ';

}

}

}

void displayBoard(char board[SIZE][SIZE]) {

printf("\n");

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

for (int j = 0; j < SIZE; j++) {

printf(" %c ", board[i][j]);

if (j < SIZE - 1) printf("|");

}

printf("\n");

if (i < SIZE - 1) printf("---+---+---\n");

}

printf("\n");

}

int checkWin(char board[SIZE][SIZE]) {

// Check rows and columns

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

if (board[i][0] == board[i][1] && board[i][1] == board[i][2] && board[i][0] != ' ') return 1; // Row win

if (board[0][i] == board[1][i] && board[1][i] == board[2][i] && board[0][i] != ' ') return 1; // Column win

}

if (board[0][0] == board[1][1] && board[1][1] == board[2][2] && board[0][0] != ' ') return 1; // Diagonal win

if (board[0][2] == board[1][1] && board[1][1] == board[2][0] && board[0][2] != ' ') return 1; // Diagonal win

return -1;

}

int checkDraw(char board[SIZE][SIZE]) {

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

for (int j = 0; j < SIZE; j++) {

if (board[i][j] == ' ') return 0; // Not a draw

}

}

return 1;

}

void makeMove(char board[SIZE][SIZE], int row, int col, char player) {

board[row][col] = player;

}