#include <stdio.h>

int main (void)

{

int player = 0;

int winner = 0;

int choice = 0;

int row = 0;

int column = 0;

int line = 0;

char board [3][3] = {

{'1','2','3'},

{'4','5','6'},

{'7','8','9'}

};

for (int i = 0; i<9 && winner==0; i++)

{

printf("\n\n");

printf(" %c | %c | %c\n", board[0][0], board[0][1], board[0][2]);

printf("---|---|---\n");

printf(" %c | %c | %c\n", board[1][0], board[1][1], board[1][2]);

printf("---|---|---\n");

printf(" %c | %c | %c\n", board[2][0], board[2][1], board[2][2]);

player = i%2 + 1;

do

{

printf("\nPlayer %d, please enter the number of the square "

"where you want to place your %c: ",

player,(player==1)?'X':'O');

scanf("%d", &choice);

row = --choice/3;

column = choice%3;

}while(choice<0 || choice>9 || board [row][column]>'9');

board[row][column] = (player == 1) ? 'X' : 'O';

if((board[0][0]==board[1][1] && board[0][0]==board[2][2]) ||

(board[0][2]==board[1][1] && board[0][2]==board[2][0]))

winner = player;

else

for(line = 0; line <=2; line++)

if((board[line][0]==board[line][1] && board[line][0]==board[line][2])||

(board[0][line]==board[1][line] && board[0][line]==board[2][line]))

winner = player;

}

printf("\n\n");

printf(" %c | %c | %c\n", board[0][0], board[0][1], board[0][2]);

printf("---|---|---\n");

printf(" %c | %c | %c\n", board[1][0], board[1][1], board[1][2]);

printf("---|---|---\n");

printf(" %c | %c | %c\n", board[2][0], board[2][1], board[2][2]);

if(winner==0)

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

else

printf("Player %d has won\n", winner);

return 0;

}