#include <stdio.h>

int main(void)

 {

     int player = 0;

     int winener = 0 ;

     int choice = 0;

     unsigned int row = 0;

     unsigned int colume = 0;

     char board [3][3] = {

         {'1','2','3'},

         {'4','5','6'},

         {'7','8','9'},

     };

     // Mian game loop. The game continues for up to 9 turns

     // as long as there is no winner

     printf("This is a Tic-Tac-Toe Game.");

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

     {

         //display the board

         printf("\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;

         // Get Valid player square selection

         do {

         printf("player%d,please enter a valid square number"

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

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

                 scanf("%d",&choice);

                 row = --choice / 3;

                 colume = choice % 3;

         }while (choice <0 || choice >8 || board[row][colume]>'9');

         // Insert player symble

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

         // Check for a winning line - diagonals first

         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]))

             winener = player;

         else

         {

             // check rows and columes for a winning line

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

             {

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

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

             winener = player;

             }

         }

     }

     // Game is over so display the final board

    printf("\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]);

    // Display result message

    if (winener)

        printf("\ncongratulations, player %d, you are the winner!\n",winener);

    else

        printf ("\n it is a draw\n");

    return 0;

}