#include<stdio.h>

int board[3][3]= {{0,0,0},{0,0,0},{0,0,0}};

void initial(){

printf("player 1 is X and player 2 is O \nWhen asked to play they have to enter a location according to the given pattern\n1|2|3\n-+-+-\n4|5|6\n-+-+-\n7|8|9\n");

}

void printboard(){

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

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

int k = board[i][j];

if (k==0)

printf(" ");

if (k ==1)

printf("X");

if (k == 2)

printf("O");

if (j!=2){

printf("|");

}

}

if (i!=2){

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

}else{

printf("\n");

}

}

}

void getinputx(){

int n[2];

printf("player 1 play ");

scanf("%d",&n[0]);

n[0]-=1;

n[1]=n[0]%3;

n[0]=n[0]/3;

if((n[0]>=0&&n[0]<3)&&(n[1]>=0&&n[1]<3)){

if (board[n[0]][n[1]]==0){

board[n[0]][n[1]] = 1;

return;

}

}

printf("invalid input \t");

getinputx();

return;

}

void getinputo(){

int n[2];

printf("player 2 play ");

scanf("%d",&n[0]);

n[0]-=1;

n[1]=n[0]%3;

n[0]=n[0]/3;

if((n[0]>=0&&n[0]<3)&&(n[1]>=0&&n[1]<3)){

if (board[n[0]][n[1]]==0){

board[n[0]][n[1]] = 2;

return;

}

}

printf("invalid input \t");

getinputo();

return;

}

int checkgame(){

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

if (board[i][0]==board[i][1]&& board[i][1]==board[i][2]&& board[i][0]!=0){

printf("player %d wins the game ",board[i][0]);

return 1;

}

}

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

if (board[0][i]==board[1][i]&& board[1][i]==board[2][i] &&board[2][i]!=0){

printf("player %d wins the game ",board[0][i]);

return 1;

}

}

if (board[0][0]== board[1][1]&&board[1][1]== board[2][2]&& board[1][1]!=0){

printf("player %d wins the game ",board[1][1]);

return 1;

}

if (board[2][0]== board[1][1]&&board[1][1]== board[0][2]&& board[1][1]!=0){

printf("player %d wins the game ",board[1][1]);

return 1;

}

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

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

if(board[i][j] ==0){

return 0;

}

}

}

printf("Game Tied");

return 1 ;

}

int main(){

initial();

int chance = 0;

int n = 0;

while (n!=1){

if (chance ==0){

getinputx();

printboard();

n = checkgame();

chance = 1;

}else if (chance == 1){

getinputo();

printboard();

chance = 0;

n = checkgame();

}

}

printf("\nHope You liked the game");

return 0;

}