import java.util.Scanner;

public class TicTacToe {

// Set up the game board as an array

static String[] board = {"-", "-", "-", "-", "-", "-", "-", "-", "-"};

// Define a function to print the game board

static void printBoard() {

System.out.println(board[0] + " | " + board[1] + " | " + board[2]);

System.out.println(board[3] + " | " + board[4] + " | " + board[5]);

System.out.println(board[6] + " | " + board[7] + " | " + board[8]);

}

// Define a function to handle a player's turn

static void takeTurn(String player) {

Scanner scanner = new Scanner(System.in);

System.out.println(player + "'s turn.");

System.out.print("Choose a position from 1-9: ");

int position = scanner.nextInt() - 1;

while (position < 0 || position > 8 || !board[position].equals("-")) {

System.out.print("Invalid input or position already taken. Choose a different position: ");

position = scanner.nextInt() - 1;

}

board[position] = player;

printBoard();

}

// Define a function to check if the game is over

static String checkGameOver() {

// Check for a win

if ((board[0].equals(board[1]) && board[1].equals(board[2]) && !board[0].equals("-")) ||

(board[3].equals(board[4]) && board[4].equals(board[5]) && !board[3].equals("-")) ||

(board[6].equals(board[7]) && board[7].equals(board[8]) && !board[6].equals("-")) ||

(board[0].equals(board[3]) && board[3].equals(board[6]) && !board[0].equals("-")) ||

(board[1].equals(board[4]) && board[4].equals(board[7]) && !board[1].equals("-")) ||

(board[2].equals(board[5]) && board[5].equals(board[8]) && !board[2].equals("-")) ||

(board[0].equals(board[4]) && board[4].equals(board[8]) && !board[0].equals("-")) ||

(board[2].equals(board[4]) && board[4].equals(board[6]) && !board[2].equals("-"))) {

return "win";

}

// Check for a tie

else if (!String.join("", board).contains("-")) {

return "tie";

}

// Game is not over

else {

return "play";

}

}

// Define the main game loop

public static void main(String[] args) {

printBoard();

String currentPlayer = "X";

boolean gameOver = false;

while (!gameOver) {

takeTurn(currentPlayer);

String gameResult = checkGameOver();

if (gameResult.equals("win")) {

System.out.println(currentPlayer + " wins!");

gameOver = true;

} else if (gameResult.equals("tie")) {

System.out.println("It's a tie!");

gameOver = true;

} else {

// Switch to the other player

currentPlayer = currentPlayer.equals("X") ? "O" : "X";

}

}

}

}