

```
import java.util.Scanner;
```

```
public class TicTacChallenge{
```

```
    public char[][] gameBoard;
```

```
    public char currentSymbol;
```

```
    public TicTacChallenge()
```

```
    {
```

```
        gameBoard = new char[3][3];
```

```
        currentSymbol = 'X';
```

```
        resetBoard();
```

```
    }
```

```
    public void resetBoard(){
```

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

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

```
                gameBoard[i][j] = '-';
```

```

    }
}

}

public void showBoard(){

    System.out.println("-----");

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

        System.out.print("| ");

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

            System.out.print(gameBoard[i][j] + " | ");

        }

        System.out.println();

        System.out.println("-----");

    }

}

```

```
public void initiateGame(){
```

```
    boolean win = false;
```

```
    boolean draw = false;
```

```
    while (!win && !draw){
```

```
        showBoard();
```

```
        makeMove();
```

```
        win = findWinner();
```

```
        if (!win){
```

```
            draw = findDraw();
```

```
            if (!draw) {
```

```
                togglePlayer();
```

```
            }
```

```
        }
```

```
}
```

```
showBoard();
```

```
if (win){
```

```
    System.out.println("Congrats! Player " + currentSymbol + " wins!");
```

```
}
```

```
else if (draw){
```

```
    System.out.println("It's a DRAW.");
```

```
}
```

```
}
```

```
public void makeMove(){
```

```
    Scanner scan = new Scanner(System.in);
```

```
    int r, c;
```

```
    while(true){
```

```
        System.out.println("Player " + currentSymbol + ", make your move (row [1-3] and  
column [1-3]): ");
```

```

r = scan.nextInt() - 1;

c = scan.nextInt() - 1;

if(r >= 0 && c >= 0 && r < 3 && c < 3 && gameBoard[r][c] == '-'){
    gameBoard[r][c] = currentSymbol;
    break;
} else {
    System.out.println("Invalid move, try again.");
}
}
}

public boolean findWinner() {

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

        if ((gameBoard[i][0] == currentSymbol && gameBoard[i][1] == currentSymbol &&
gameBoard[i][2] == currentSymbol) ||

            (gameBoard[0][i] == currentSymbol && gameBoard[1][i] == currentSymbol &&
gameBoard[2][i] == currentSymbol)) {

            return true;

        }

    }

    if ((gameBoard[0][0] == currentSymbol && gameBoard[1][1] == currentSymbol &&
gameBoard[2][2] == currentSymbol) ||

```

```
(gameBoard[0][2] == currentSymbol && gameBoard[1][1] == currentSymbol &&  
gameBoard[2][0] == currentSymbol)) {
```

```
    return true;
```

```
}
```

```
return false;
```

```
}
```

```
public boolean findDraw() {
```

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

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

```
            if (gameBoard[i][j] == '-') {
```

```
                return false;
```

```
            }
```

```
        }
```

```
    }
```

```
return true;
```

```
}
```

```
public void togglePlayer(){
```

```
    if (currentSymbol == 'X') {
```

```
        currentSymbol = 'O';
```

```
    }
```

```
    else {
```

```
        currentSymbol = 'X';
```

```
    }
```

```
}
```

```
public static void main(String[] args){
```

```
TicTacChallenge challenge = new TicTacChallenge();
```

```
challenge.initiateGame();
```

```
}
```

```
}
```