

Tic Tac Toe

```
import java.util.Scanner;

class Main {

    public static void main(String[] args) {

        char[][] board = new char[3][3];

        for (int row = 0; row < board.length; row++) {
            for (int col = 0; col < board[row].length; col++) {
                board[row][col] = ' ';
            }
        }

        char player = 'X';

        boolean gameOver = false;

        Scanner scanner = new Scanner(System.in);

        while (!gameOver) {

            printBoard(board);

            System.out.print("Player " + player + " enter: ");

            int row = scanner.nextInt();

            int col = scanner.nextInt();

            System.out.println();

            if (board[row][col] == ' ') {

                board[row][col] = player; // place the element

                gameOver = haveWon(board, player);

                if (gameOver) {

                    System.out.println("Player " + player + " has won: ");

                } else {
```

```

        // if (player == 'X') {
        // player = 'O';
        // } else {
        // player = 'X';
        // }

        player = (player == 'X') ? 'O' : 'X';
    }
} else {
    System.out.println("Invalid move. Try again!");
}
}
printBoard(board);
}

```

```

public static boolean haveWon(char[][] board, char player) {
    // check the rows
    for (int row = 0; row < board.length; row++) {
        if (board[row][0] == player && board[row][1] == player && board[row][2] == player) {
            return true;
        }
    }

    // check for col
    for (int col = 0; col < board[0].length; col++) {
        if (board[0][col] == player && board[1][col] == player && board[2][col] == player) {
            return true;
        }
    }
}

```

```

// diagonal
if (board[0][0] == player && board[1][1] == player && board[2][2] == player) {
    return true;
}

if (board[0][2] == player && board[1][1] == player && board[2][0] == player) {
    return true;
}

return false;
}

public static void printBoard(char[][] board) {
    for (int row = 0; row < board.length; row++) {
        for (int col = 0; col < board[row].length; col++) {
            System.out.print(board[row][col] + " | ");
        }
        System.out.println();
    }
}
}

```

This project was completely made by Avala Harika

******* End of the Code*******

*******THANK YOU*******