Indira Gandhi Delhi Technical University for Women

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Kashmere Gate, Delhi - 110006

PROJECT For

OBJECT ORIENTED PROGRAMMING USING JAVA (BAI-102)

Submitted to:

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Tic Tac Toe Game

```java
import java.util.*;

class TicTakToe {
    public static void main(String[] args) {
        char[][] board = new char[3][3];
        for (int i = 0; i < board.length; i++) {
            for (int j = 0; j < board[i].length; j++) {
                board[i][j] = ' ';
            }
        }
        char player = 'X';
        boolean gameOver = false;
        Scanner sc = new Scanner(System.in);

        while (!gameOver) {
            printBoard(board);
            System.out.print("Player " + player + " enter your choice index  :
");
            int row = sc.nextInt();
            int col = sc.nextInt();

            if (board[row][col] == ' ') {
                board[row][col] = player;
                gameOver = haveWon(board, player);
                if (gameOver) {
                    System.out.println("Player " + player + " has won.");
                    printBoard(board);
                } else {
                    if (player == 'X') {
                        player = 'O';
                    } else {
                        player = 'X';
                    }
                }

            } else {
                System.out.println("Invalid move! Try again");
            }
        }
        sc.close();
    }
    public static void printBoard(char[][] board) {
        for (int i = 0; i < board.length; i++) {
            for (int j = 0; j < board[i].length; j++) {
                System.out.print(board[i][j]+"|");
            }
```

```java
            System.out.println();
        }
    }
    public static boolean haveWon(char[][] board, char player) {
        for (int i = 0; i < 3; i++) {
            if ((board[i][0] == player && board[i][1] == player && board[i][2]
== player) ||
                (board[0][i] == player && board[1][i] == player && board[2][i] ==
player) ||
                (board[0][0] == player && board[1][1] == player && board[2][2] ==
player) ||
                (board[0][2] == player && board[1][1] == player && board[2][0] ==
player)) {
                    return true;
            }
        }
        return false;
    }
}
```