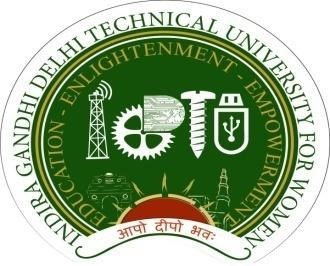
**Indira Gandhi Delhi Technical University for Women**

**(Established by Govt. of Delhi vide Act 09 of 2012)**

**Kashmere Gate, Delhi - 110006**



**PROJECT For**

**OBJECT ORIENTED PROGRAMMING USING JAVA (BAI-102)**

***Submitted to: Submitted By:***

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Enrolment No.: 09301172022

Semester: 2nd Semester

**Tic Tac Toe Game**

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]+"|");

            }

            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;

    }

}