

**Shri Jain Vidya Prasarak Mandal's
RASIKLAL M. DHARIWAL INSTITUTE OF TECHNOLOGY,
CHINCHWAD, PUNE-33**



**MICRO PROJECT REPORT
ON
“TIC TAC TOE GAME”**

SUBMITTED BY

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**Mrs.N.R.Dangi
GUIDED BY**

**Mrs. A.A. Deshpande
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**Mr. A. B. Thite
PRINCIPAL**

2019-2020

ACKNOWLEDGEMENT

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We would like to thanks all the Teaching, Non-Teaching staff members of the Department and our colleagues those who helped us directly or indirectly for completing this Micro Project successfully.

We are also really thankful to our Principal **Mr. A. B. Thite** for his valuable guidance.

Roshan Dhoka
Yash Chordiya
Ravina Chavan
Nikita Chaudhari

**DIPLOMA
IN
COMPUTER ENGINEERING
Maharashtra State Board Technical Education**



Est. 8/9/1927

This is to certify that

Mr.Roshan Dhoka

Mr.yash chordiya

Ms.Ravina Chavan

Ms.Nikita Chaudhari

Of Second year have successfully completed the Micro Project titled

“Tic Tac Toe game”

In the partial submission of the diploma Computer Engineering

Recommended by Maharashtra State Board Technical Education

For the Academic Year

2019-20

**Mrs.N.R.Dangi
GUIDED BY**

**Mrs. A.A. Deshpande
HEAD OF DEPT**

**Mr. A. B. Thite
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SHRI JAIN VIDYA PRASARAK MANDAL'S
RAIKLAL M.DHARIWAL INSTUTE OF TECHNOLOGY,
CHINCHWAD-33.

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Course & code: CO4I

Subject: JPR

Semester: FOURTH

Batch: A

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PART A
For 4th Semester
Format for Micro-Project Report
TIC-TAC-TOE GAME

1.0 Aim/Brief Introduction:-

1. This project helps us to use java functions.
2. We have learned different function and java concept.
3. We are using java language for our project.
4. This game is interesting for all type of people.

2.0 Course outcomes addressed:-

1. Develop programs using object oriented methodology in java.
2. Apply concept of inheritance for code reusability.
3. Develop programs using multithreading.
4. Implement exception handling.

3.0 Proposed methodology:-

1. We have selected the project topic TIC-TAC-TOE game.
2. We have search information about tic-tac game form internet.
3. Then we have collected the information and convert it into points.
4. We have read all the information about tic-tac toe game.
5. We have created a logbook of information tic-tac toe game.
6. We have used concept of tic-tac toe game and function in program.
7. We have run the code for tic-tac toe game.

4.0 Action Plan:-

Sr.no.	Details of activity	Planned Start date	Planned Finish date	Name of Responsible Team Members
1	Collect the information about “Tic Tac Toe” game	19-12-2019	26-12-2019	All team member
2	Sort the collected information of “Tic Tac Toe” game of topic.	26-12-2019	6-1-2020	Ravina chavan
3	Collected information is converted into point.	6-1-2020	16-1-2020	Roshan dhoka
4	Search the coding about topic	16-1-2020	27-1-2020	Yash chordiya
5	Remove the errors under guidance of subject teacher.	27-1-2020	3-2-2020	Nikita chaudhari
6	Seminar	3-2-2020	12-2-2020	All team member

5.0 Resources required :-

Sr.no.	Name of Resource/material	Specification	Qty	Remarks
1	Computer system	Computer i-3 ram-2GB	1	✓
2	Software	CMD	1	✓
3	Operation system	Window 7 /Linux version 5.0	1	✓

8.0 Name of Student With Roll no:-

Sr.no	Name of student	Roll no
1	Roshan Dhoka	1
2	Yash Chordiya	2
3	Ravina Chavan	3
4	Nikita Chaudhari	4

PART B

Format for Micro-Project Report

TIC-TAC-TOE GAME

1.0 Rationale:-

The game is played on a grid those 3 squares by 3 squares. you are x ,your friend (or the computer in this case) is co-players take turn putting their marks in empty squares. The first player to get 3 of her marks in a row (up, down, across, or, diagonally) is the winner. When all 9 squares are full the game is over. If no player has 3 marks in a row, the game and in a tie.

2.0 Aim of Micro Project:-

1. This project helps us to use java functions.
2. We have learned different function and java concept.
3. We are using java language for our project.
4. This game is interesting for all type of people.

3.0 Course outcome Addressed:-

1. Develop programs using object oriented methodology in java.
2. Apply concept of inheritance for code reusability.
3. Develop programs using multithreading.
4. Implement exception handling.

4.0 Literature review:-

Website:-

www.instructables.com

www.geeksforgeeks.org

Reference Book :-

The complete reference:-

(Author name:- helbirt shilt)

The program in java:-

(Author name:Balguru swami)

5.0 Actual methodology followed:-

1. We have selected the project topic TIC-TAC-TOE game.
2. We have search information about tic-tac game form internet.
3. Then we have collected the information and convert it into points.
4. We have read all the information about tic-tac toe game.
5. We have created a logbook of information tic-tac toe game.
6. We have used concept of tic-tac toe game and function in program.
7. We have run the code for tic-tac toe game.

6.0 Actual Resources Required:-

Sr.no.	Name of Resource/material	Specification	Qty	Remarks
1	Computer system	Computer i-3 ram-2GB	2	✓
2	Software	JDK1.7	2	✓
3	Operation system	Window 7 /Linux version 5.0	1	✓

7.0 output of the micro project

```

Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Program Files\Java\jdk1.7.0_10\bin>javac TicTacToeTest.java
C:\Program Files\Java\jdk1.7.0_10\bin>java TicTacToeTest
Player X turn
Enter x and y places
00 00
X |  | 
-----
  |  | 
-----
  |  | 
-----
Player O turn
Enter x and y places
01 00
X |  | 
-----
O |  | 
-----
  |  | 
-----
Player X turn

```

```

Administrator: C:\Windows\System32\cmd.exe
Player X turn
Enter x and y places
00 01
X | X | 
-----
O |  | 
-----
  |  | 
-----
Player O turn
Enter x and y places
01 02
X | X | 
-----
O |  | O
-----
  |  | 
-----

```

```
Administrator: C:\Windows\System32\cmd.exe
Player O turn
Enter x and y places
01 02
X | X |
-----
O |   | O
-----
|   |
-----
Player X turn
Enter x and y places
00 02
X | X | X
-----
O |   | O
-----
|   |
-----
X wins...!!
C:\Program Files\Java\jdk1.7.0_10\bin>_
RMDIOT
```

8.0 Skill Developed/Learning out of this Micro-Project:-

1. We learned about the concept of Tic Tac Toe game.
2. We learned how to execute a program by using java function.
3. We learned critical thinking and problem solving techniques.
4. We learned effective oral and written communication.
5. We learned accessing and analysing information.
6. With this micro project we develop curiosity and imagination.

9.0 Application of the micro project:-

- 1) In Tic-Tac Dough, players put symbols up on the board by answering questions in various categories, which shuffle after each player's turn.
- 2) In Beat the Teacher, contestants answer questions to win a turn to influence a tic-tac-toe grid.
- 3) On The price is Right, several national variants feature a pricing game called "secret X", in which players must guess prices of two small prizes to win Xs (in addition to one free X) to place on a blank board.
- 4) They must place the X's in position to guess the location of the titular "secret X" hidden in the centre column of the board and foam a tic-tac-toe line across or diagonally (on vertical lines allowed).

On Minute to win it, the game ping TAC toe has one contestant playing the game with nine water-filled glasses and white and orange Ping-Pong balls, tarrying to get three in a row of either colour.

He must alternate colours after each successful landing and must be careful not to block himself.

10.0 Coding:-

```
import java.util.Scanner;

public class TicTacToeTest{

    public static void main(String[ ] args) {

        TicTacToe t = new TicTacToe();

        Scanner s = new Scanner(System.in);

        int x=0,y=0;

        do

        {

            System.out.println(t.player==t.X?"Player X turn":"Player O turn");

            System.out.println("Enter x and y places");

            x=s.nextInt();

            y=s.nextInt();

            t.putSign(x, y);

            System.out.println(t.toString());

            System.out.println("_____");

            t.displayWinner();

        }while(t.isEmpty);

    }

}

class TicTacToe
```

```
{

    public static final int X = 1, O = -1;

    public static final int EMPTY = 0;

    public int player = X;

    private int[][] board = new int[3][3];

    public boolean isEmpty = false;

    public void putSign(int x, int y)
    {
        if(x<0 || x>2 || y<0 || y>2)
        {
            System.out.println("Invalid board position");

            return;
        }

        if(board[x][y] != EMPTY)
        {
            System.out.println("Board position occupied");

            return;
        }

        board[x][y] = player; // place the mark for the current player

        player = -player;    // switch players (uses fact that O = - X)
    }

    public boolean isWin(int player)
    {
        return ((board[0][0] + board[0][1] + board[0][2] == player*3) ||

                (board[1][0] + board[1][1] + board[1][2] == player*3) ||
```

```
(board[2][0] + board[2][1] + board[2][2] == player*3) ||  
  
(board[0][0] + board[1][0] + board[2][0] == player*3) ||  
  
(board[0][1] + board[1][1] + board[2][1] == player*3) ||  
  
(board[0][2] + board[1][2] + board[2][2] == player*3) ||  
  
(board[0][0] + board[1][1] + board[2][2] == player*3) ||  
  
(board[2][0] + board[1][1] + board[0][2] == player*3));  
  
}  
  
public void displayWinner()  
  
{  
  
    if(isWin(X))  
  
    {  
  
        System.out.println("\n X wins...!!");  
  
        isEmpty=false;  
  
    }  
  
    else if(isWin(O))  
  
    {  
  
        System.out.println("\n O wins...!!");  
  
        isEmpty=false;  
  
    }  
  
    else  
  
    {  
  
        if(!isEmpty)  
  
        {  
  
            System.out.println("its a tie");  
  
        }  
  
    }  
  
}
```

```
    }  
}  
  
public String toString()  
{  
    StringBuilder s = new StringBuilder();  
    isEmpty = false;  
    for(int i=0;i<3;i++)  
    {  
        for(int j=0;j<3;j++)  
        {  
            switch(board[i][j])  
            {  
                case X:  
                    s.append(" X ");  
                    break;  
                case O:  
                    s.append(" O ");  
                    break;  
                case EMPTY:  
                    s.append(" ");  
                    isEmpty=true;  
                    break;  
            }  
        }  
    }  
    if(j<2)  
    {
```

```
        s.append("|");  
    }  
}  
if(i<2)  
{  
    s.append("\n-----\n");  
}  
}  
return s.toString();  
}  
}
```