

```

import java.util.Scanner;
class TicTacToe
{
    static char[][] board;
    public TicTacToe()
    {
        board=new char[3][3];
        initBoard();
    }
    void initBoard()
    {
        for(int i=0;i<board.length;i++)
        {
            for(int j=0;j<board[i].length;j++)
            {
                board[i][j]= ' ';
            }
        }
    }
    static void dsplay()
    {

```

```

        static void dsplay()
        {
            System.out.println("-----");
            for(int i=0;i<board.length;i++)
            {
                System.out.print("|");
                for(int j=0;j<board[i].length;j++)
                {
                    System.out.print(board[i][j] +" | ");
                }
                System.out.println();
                System.out.println("-----");
            }
        }
        static void placeMark(int row,int col,char mark)
        {
            if(row>=0&&row<=2&&col>=0&&col<=2)
            {
                board[row][col]=mark;
            }
            else
            {

```

```

        else
        {
            System.out.println("invalid position");
        }
    }
    static boolean checkColWin()
    {
        for(int j=0;j<=2;j++)
        {
            if(board[0][j]!=' ' && board[0][j]==board[1][j]&&board[1][j]==board[2][j])
            {
                return true;
            }
        }
        return false;
    }
    static boolean checkRowWin()
    {
        for(int i=0;i<=2;i++)
        {
            if( board[i][0]!=' ' &&board[i][0]==board[i][1]&&board[i][1]==board[i][2])
            {
                return true;
            }
        }
        return false;
    }
    static boolean checkDiagWin()
    {
        if( board[0][0]!=' ' &&board[0][0]==board[1][1]&&board[1][1]==board[2][2] || board[0][2]!=' ' &&board[0][2]==board[1][1]&&board[1][1]==board[2][0])
        {
            return true;
        }
        else
        {
            return false;
        }
    }
}
class HumanPlayer
{
    String name;
    char mark;
    HumanPlayer(String name, char mark)
    {
        this.name = name;
        this.mark = mark;
    }
}

```

```

    }
    }
    return false;
}
static boolean checkDiagWin()
{
    if( board[0][0]!=' ' &&board[0][0]==board[1][1]&&board[1][1]==board[2][2] || board[0][2]!=' ' &&board[0][2]==board[1][1]&&board[1][1]==board[2][0])
    {
        return true;
    }
    else
    {
        return false;
    }
}
}
class HumanPlayer
{
    String name;
    char mark;
    HumanPlayer(String name, char mark)
    {
        this.name = name;
        this.mark = mark;
    }
}

```

```

HumanPlayer(String name,char mark)
{
    this.name=name;
    this.mark=mark;
}
void makeMove()
{
    Scanner sc=new Scanner(System.in);
    int row;
    int col;
    do{
        System.out.println("enter row and column");
        row=sc.nextInt();
        col=sc.nextInt();
    }while(!isValidMove(row,col));
    TicTacToe.placeMark(row,col,mark);
}
boolean isValidMove(int row,int col)
{
    if(row>=0&&row<=2&&col>=0&&col<=2)
    {
        if(TicTacToe.board[row][col]!=' ')

```

```

boolean isValidMove(int row,int col)
{
    if(row>=0&&row<=2&&col>=0&&col<=2)
    {
        if(TicTacToe.board[row][col]==' ')
        {
            return true;
        }
    }
    return false;
}
}
class Launchgame
{
    public static void main(String args[])
    {
        TicTacToe t=new TicTacToe();
        HumanPlayer p1=new HumanPlayer("neela's",'x');
        HumanPlayer p2=new HumanPlayer("sasi's",'o');
        HumanPlayer cp;
        cp=p1;
        while(true)

```



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22621.1992]
(c) Microsoft Corporation. All rights reserved.

C:\neela>JAVAC Launchgame.java

C:\neela>java Launchgame
neela's turn
enter row and column
0 1
-----
| | x | |
| | | |
| | | |
-----
sasi's turn
enter row and column
1 1
-----
| | x | |
| | o | |
| | | |
-----
neela's turn
enter row and column
0 0
-----
|x | x | |
| | o | |
| | | |
-----
sasi's turn
enter row and column
2 0
-----
|x | x | |
| | o | |
| | | |
-----
```

```
C:\Windows\System32\cmd.exe
-----
| | o | |
| | | |
-----
neela's turn
enter row and column
0 0
-----
|x | x | |
| | o | |
| | | |
-----
sasi's turn
enter row and column
2 0
-----
|x | x | |
| | o | |
| o | | |
-----
neela's turn
enter row and column
0 2
-----
|x | x | x |
| | o | |
| o | | |
-----
neela's has won

C:\neela>
```