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package programmingassignment5;

import java.util.Random;

public class GameBoard
{
    private char [][] gameBoard;
    private int plays;

    public GameBoard ( )
    {
        //initialize
        boolean X;
        int row;
        int column;
        Random rand = new Random();
        gameBoard = new char[3][3];
        //Write code to initialize each location in gameBoard to '-'
        for (int row1 = 0; row1 < 3; row1++)
        {
            for (int col1 = 0; col1 < 3; col1++)
            {
                gameBoard[row1][col1] = '-';
            }
        }
    }

    public boolean play ( boolean X, int row, int column )
    //make sure this is a legal move first (not out of bounds)
    //make sure the location is available next
    //if there is an available location...put the correct piece there
    {
        if ( row < 3 && column < 3)
        {
            if (gameBoard[row][column] == '-')
            {
                if (X == true)
                    gameBoard[row][column] = 'X';
                else
                    gameBoard[row][column] = 'O';
                plays++;
                return true;
            }
            else
                return false;
        }
        return false;
    }

    public int validPlayCount ( )
    {
        return plays;
    }

    public char checkWin ( )
    {
        //Returns X if it won, O if it won, T if it is a tie, or P if none of the other
        conditions.
        char X;
    }
}

```

# GameBoard.java

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char O;
char T;
char P;
//X win cases
if (gameBoard[0][0] == 'X' && gameBoard[0][1] == 'X' && gameBoard[0][2] == 'X')
    return 'X';
else if (gameBoard[1][0] == 'X' && gameBoard[1][1] == 'X' && gameBoard[1][2] ==
'X')
    return 'X';
else if (gameBoard[2][0] == 'X' && gameBoard[2][1] == 'X' && gameBoard[2][2] ==
'X')
    return 'X';
else if (gameBoard[0][0] == 'X' && gameBoard[1][0] == 'X' && gameBoard[2][0] ==
'X')
    return 'X';
else if (gameBoard[0][1] == 'X' && gameBoard[1][1] == 'X' && gameBoard[2][1] ==
'X')
    return 'X';
else if (gameBoard[0][2] == 'X' && gameBoard[1][2] == 'X' && gameBoard[2][2] ==
'X')
    return 'X';
else if (gameBoard[0][0] == 'X' && gameBoard[1][1] == 'X' && gameBoard[2][2] ==
'X')
    return 'X';
else if (gameBoard[1][2] == 'X' && gameBoard[1][1] == 'X' && gameBoard[2][0] ==
'X')
    return 'X';

//O win cases
else if (gameBoard[0][0] == 'O' && gameBoard[0][1] == 'O' && gameBoard[0][2] ==
'O')
    return 'O';
else if (gameBoard[1][0] == 'O' && gameBoard[1][1] == 'O' && gameBoard[1][2] ==
'O')
    return 'O';
else if (gameBoard[2][0] == 'O' && gameBoard[2][1] == 'O' && gameBoard[2][2] ==
'O')
    return 'O';
else if (gameBoard[0][0] == 'O' && gameBoard[1][0] == 'O' && gameBoard[2][0] ==
'O')
    return 'O';
else if (gameBoard[0][1] == 'O' && gameBoard[1][1] == 'O' && gameBoard[2][1] ==
'O')
    return 'O';
else if (gameBoard[0][2] == 'O' && gameBoard[1][2] == 'O' && gameBoard[2][2] ==
'O')
    return 'O';
else if (gameBoard[0][0] == 'O' && gameBoard[1][1] == 'O' && gameBoard[2][2] ==
'O')
    return 'O';
else if (gameBoard[1][2] == 'O' && gameBoard[1][1] == 'O' && gameBoard[2][0] ==
'O')
    return 'O';

//Tie case
else if(plays >= 9)
    return 'T';
//If none of the cases above are met, they are still playing.
else

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        return 'P';
    } //checkWin

    public void showBoard ( )
    {
        //Displays the board after each move.
        System.out.println(" " + gameBoard[0][0] + " | " + gameBoard[0][1] + " | " +
gameBoard[0][2]);
        System.out.println("---+---+---");
        System.out.println(" " + gameBoard[1][0] + " | " + gameBoard[1][1] + " | " +
gameBoard[1][2]);
        System.out.println("---+---+---");
        System.out.println(" " + gameBoard[2][0] + " | " + gameBoard[2][1] + " | " +
gameBoard[2][2]);
        System.out.println();
    } //showBoard
} //GameBoard class

```