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package bingogame;
import java.util.Random;

public class BingoCard {

    private int[][] bingoCardArray;
    Random myRan = new Random();

    public BingoCard()
    {
        bingoCardArray = new int[5][5]; // Setting the size of the 2D bingo array
        int ranNum;

        for (int col = 0; col < 5; col++) // Creating the columns in the bingo 2D
array
        {
            for (int row = 0; row < 5; row++) // Creating the rows in the bingo 2D
array
            {
                if (col == 0){
                    do{
                        ranNum = myRan.nextInt(15) + 1; // code to set the random
number generation
                    } while (checkForDuplicates(col, ranNum) == true); // checking
for duplicates in 2D array
                    bingoCardArray[row][col] = ranNum;
                }
                else if (col == 1)
                {
                    do
                    {
                        ranNum = myRan.nextInt(15) + 16;
                    } while (checkForDuplicates(col, ranNum) == true);
                    bingoCardArray[row][col] = ranNum;
                }
                else if (col == 2)
                {
                    do
                    {
                        ranNum = myRan.nextInt(15) + 31;
                    } while (checkForDuplicates(col, ranNum) == true);
                    bingoCardArray[row][col] = ranNum;
                }
                else if (col == 3)
                {

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public boolean gotBingo() // this code is meant to count the number of 0's in
our card, by rows, columns and diagonally to see whether we got bingo
{
    int count0s = 0;

    // For Rows
    for(int i = 0; i < bingoCardArray[0].length; i++){
        count0s = 0;

        for(int j = 0; j < bingoCardArray.length; j++){

            if(bingoCardArray[j][i] == 0){
                count0s++;
            }
        }

        if(count0s == 5){
            return true;
        }
    }

    // For Columns
    for(int i = 0; i < bingoCardArray.length; i++){
        count0s = 0;

        for(int j = 0; j < bingoCardArray[0].length; j++){

            if(bingoCardArray[i][j] == 0){
                count0s++;
            }
        }

        if(count0s == 5){
            return true;
        }
    }

    // For Diagonal
    count0s = 0;
    for(int i = 0; i < bingoCardArray.length; i++){

        for(int j = 0; j < bingoCardArray[0].length; j++){

            if(i == j && bingoCardArray[i][j] == 0){

                count0s++;

            }
        }
    }
}

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    }
}

if(count0s == 5){
    return true;
}

count0s = 0;
for(int i = 0; i < bingoCardArray.length; i++){
    for(int j = 0; j < bingoCardArray[0].length; j++){
        if((i + j) == bingoCardArray.length - 1 && bingoCardArray[i][j]
== 0){

            count0s++;

        }
    }

    if(count0s == 5){
        return true;
    }

    return false;
}

```

```

public String toString() // Prints out the result to the console.
{
String answer = "B I N G O\n";
for(int i = 0; i < bingoCardArray.length; i++){

    String row = "";
    for(int j = 0; j < bingoCardArray[0].length; j++){

        row = row + bingoCardArray[i][j];
        row += " ";
    }

    answer += row;
    answer += "\n";
}
return answer;
}
}

```