

```
public class DamkaBoard {  
    public static void main(String[] args) {  
        int n = Integer.parseInt(args[0]);  
        for (int i = 0; i < n; i++) {  
            if (i % 2 == 1) System.out.print(" ");  
            for (int j = 0; j < n - 1; j++) {  
                System.out.print("* ");  
            }  
            System.out.print("\n");  
            if (i % 2 == 0) System.out.print(" ");  
            System.out.println();  
        }  
    }  
}
```

```
public class Divisors {  
    public static void main (String[] args) {  
        int x = Integer.parseInt(args[0]);  
        for (int i = 1; i <= x; i++) {  
            if (x % i == 0) {  
                System.out.println(i);  
            }  
        }  
    }  
}
```

```
public class InOrder {  
    public static void main (String[] args) {  
        int rand = (int)(Math.random() * 10);  
        int i = 0;  
        while (rand >= i) {  
            System.out.print(rand + " ");  
            i = rand;  
            rand = (int)(Math.random() * 10);  
        }  
    }  
}
```

```

import java.util.Random;
/**
 * Computes some statistics about
 families in which the parents decide
 * to have children until they have at least
 one child of each gender.
 * The program expects to get two
 command-line arguments: an int value
 * that determines how many families to
 simulate, and an int value
 * that serves as the seed of the random
 numbers generated by the program.
 * Example usage: % java
 OneOfEachStats 1000 1
 */
public class OneOfEachStats {
    public static void main (String[] args) {
        // Gets the two command-line
arguments
        int T = Integer.parseInt(args[0]);
        int seed = Integer.parseInt(args[1]);
        // Initailizes a random numbers
generator with the given seed value
        Random generator = new
Random(seed);
        int count2 = 0, count3 = 0, count4 =
0;

        double sum = 0;
        for (int i = 0; i < T; i++) {
            boolean boy = false, girl = false;
            int count = 0;
            while (!boy || !girl) {
                count += 1;
                if
((int)(Math.round(generator.nextDouble()))
== 0) {
                    boy = true;
                }
                else {
                    girl = true;
                }
            }
            sum += count;
            if (count == 2) count2++;
            else if (count == 3) count3++;

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        else count4++;
    }
    System.out.println("Average: " + sum
/ T + " children to get at least one of each
gender.");
    System.out.println("Number of
families with 2 children: " + count2);
    System.out.println("Number of
families with 3 children: " + count3);
    System.out.println("Number of
families with 4 or more children: " +
count4);
    if (count4 > count3 && count4 >
count2) {
        System.out.println("The most
common number of children is 4 or
more.");
    }
    else if (count3 > count4 && count3 >
count2) {
        System.out.println("The most
common number of children is 3.");
    }
    else {
        System.out.println("The most
common number of children is 2.");
    }
}
}
```

```
public class Perfect {  
    public static void main (String[] args) {  
        String str = args[0] + " is a perfect  
number since " + args[0] + " = ";  
        int N = Integer.parseInt(args[0]);  
        int sum = 0;  
        for (int i = 1; i < N; i++) {  
            if (N % i == 0) {  
                sum += i;  
                if (i != N / 2) {  
                    str += i + " + ";  
                }  
            }  
            else {  
                str += i;  
            }  
        }  
        if (sum == N) {  
            System.out.println(str);  
        }  
        else {  
            System.out.println(N + " is not a  
perfect number");  
        }  
    }  
}
```

```
public class Reverse {  
    public static void main (String[] args){  
        String str = args[0];  
        for (int i = str.length() - 1; i >= 0; i--) {  
            System.out.print(str.charAt(i));  
        }  
        System.out.println();  
        if (str.length() % 2 == 1) {  
            System.out.println("The middle  
character is " + str.charAt(str.length() / 2));  
        }  
        else {  
            System.out.println("The middle  
character is " + str.charAt(str.length() / 2 -  
1));  
        }  
    }  
}
```