

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

```
public class Reverse {  
    public static void main (String[] args){  
        String word = args[0];  
        String reverseWord = "";  
        int middleChar = (word.length() - 1) / 2;  
        int i = word.length() - 1;  
  
        while (i >= 0) {  
            reverseWord += word.charAt(i);  
            i--;  
        }  
  
        System.out.println(reverseWord);  
        System.out.println("The middle character is " + word.charAt(middleChar));  
    }  
}
```

```
public class InOrder {  
    public static void main (String[] args) {  
        int randomInteger = (int)(Math.random() * 10);  
        int previousInteger = randomInteger;  
        System.out.print(randomInteger);  
  
        do {  
            randomInteger = (int)(Math.random() * 10);  
            if (randomInteger >= previousInteger){  
                System.out.print(" " + randomInteger);  
                previousInteger = randomInteger;  
            }  
  
        } while (previousInteger <= randomInteger);  
  
        System.out.println();  
    }  
}
```

```

public class DamkaBoard {
    public static void main(String[] args) {
        int n = Integer.parseInt(args[0]);
        //iterate through the pattern of the damka rows
        for (int i = 0; i < n ; i++) {
            //iterate through the pattern of the damka columns
            for (int j = 0; j < n; j++) {
                if (i % 2 == 0){
                    System.out.print("* ");
                } else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}

```

```

public class Perfect {
    public static void main (String[] args) {
        int number = Integer.parseInt(args[0]);
        int sum = 1;
        String isPerfect = number + " is a perfect number since " + number
+ " = 1";

        for (int i = 2; i < number; i++) {
            if (number % i == 0) {
                isPerfect += (" + " + i);
                sum += i;
            }
        }

        if (number == sum) {
            System.out.println(isPerfect);
        } else {
            System.out.println(number + " is not a perfect number");
        }
    }
}

```

```

import java.util.Random;

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 totalSum = 0;
        int twoChildren = 0;
        int threeChildren = 0;
        int fourChildrenOrMore = 0;

        for (int i = 0; i < T; i++) {
            boolean isBoy = false;
            boolean isGirl = false;
            boolean baby = true;
            int sum = 0;

            while (baby != (isGirl && isBoy)) {
                double birth = generator.nextDouble(); // birth < 0.5
                // represents a boy and birth >=0.5 represents a girl
                if (birth < 0.5) {
                    isBoy = true;
                } else {
                    isGirl = true;
                }
                sum++;
            }

            switch (sum) {
                case 2: twoChildren++;
                    break;
                case 3: threeChildren++;
                    break;
                default: fourChildrenOrMore++;
                    break;
            }

            totalSum += sum;
        }
        double average = (double) totalSum / T;
    }
}

```

```
        System.out.println("Average: " + average + " children to get at least one of
each gender.");
        System.out.println("Number of families with 2 children: " + twoChildren);
        System.out.println("Number of families with 3 children: " + threeChildren);
        System.out.println("Number of families with 4 or more children: " +
fourChildrenOrMore);

        if ((twoChildren >= threeChildren) && (twoChildren >= fourChildrenOrMore))
{
            System.out.println("The most common number of children is 2.");

        } else if ((threeChildren >= twoChildren) && (threeChildren >=
fourChildrenOrMore)) {
            System.out.println("The most common number of children is 3.");

        } else {
            System.out.println("The most common number of children is 4 or more.");

        }

    }

}
```