```java
/**
 *  Gets a command-line argument (int), and prints all the divisors of the given
 * number.
 */
public class Divisors {
    public static void main (String[] args) {
        int num = Integer.parseInt(args[0]);
        if (num == 0) {
            System.out.println("Every non-zero numbers is a divisor
            of 0");
        } else {
            for (int i = 1; i <= num; i++) {
                if (num % i == 0) {
                System.out.println(i);
                }
            }
        }
    }
}
```

```java
/**
 * Prints a given string, backward. Then prints the middle character in the
string.
 * The program expects to get one command-line argument: A string.
 */
public class Reverse {
        public static void main (String[] args){
                String input = args[0];
                int len = input.length();
                for (int i = (len - 1); i >= 0; i--) {
                        char c = input.charAt(i);
                        System.out.print(c);
                }
                System.out.println();
                if (len % 2 == 0 ){
                        System.out.println("The middle character is " +
                        input.charAt((len / 2) - 1));
                } else {
                        System.out.println("The middle character is " +
                        input.charAt(len / 2));
                }
        }
}
```

```java
/**
 * Generates and prints random integers in the range [0,10),
 * as long as they form a non-decreasing sequence.
 */
public class InOrder {
    public static void main (String[] args) {
        int random = (int) (Math.random() * 10);
        int temp = -1;
        do {
            System.out.println(random);
            temp = random;
            random = (int) (Math.random() *10);
        } while (random >= temp);
    }
}
```

```java
/**
 *  Gets a command-line argument (int), and chekcs if the given number is
perfect.
 */
public class Perfect {
    public static void main (String[] args) {
        int num = Integer.parseInt(args[0]);
        int sum = 1;
        String perfect = num + " is a perfect number since " + num + " =
1";
        for(int i = 2; i < num;  i++) {
            if(num % i == 0) {
                perfect = (perfect + " + " + i);
                sum = (sum + i);
            }
        }
        if (sum == num) {
            System.out.println(perfect);
        } else {
            System.out.println(num + " is not a perfect number");
        }
    }
}
```

```java
/**
 *  Gets a command-line argument n (int), and prints an n-by-n damka board.
 */
public class DamkaBoard {
	public static void main(String[] args) {
		int board = Integer.parseInt(args[0]);
		for (int i = 1; i <= board; i++) {
			if (i % 2 == 0) {
				System.out.print(" ");
			}
			for (int j = 1; j <= board; j++ ) {
				System.out.print("* ");
			}
			System.out.println();
		}
	}
}
```

```java
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 two_children = 0;
            int three_children = 0;
            int four_or_more = 0;
            int total_sum = 0;
            for (int i = 0; i < T; i++) {
                int count_boy = 0;
                int count_girl = 0;
                do {
                    // Generates a random number between 0
                    to 1, that determines the gender of the child
                    double random = generator.nextDouble();

                    boolean girl = (random < 0.5);
                    if (girl) {
                        total_sum++;
                        count_girl++;
                    } else {
                        total_sum++;
                        count_boy++;
                    }
                } while ((count_girl < 1) || (count_boy < 1));
```

```java
        // Determines the number of children in each family
        and updates the counts accordingly
        if (count_girl + count_boy == 2) {
                two_children++;
        } else if (count_girl + count_boy == 3) {
                three_children++;
        } else {
                four_or_more++;
        }
}

 // Determines the most common number of children in a
family
String most_common = "";
if ((two_children >= three_children) && (two_children >=
four_or_more)) {
        most_common = "2";
} else if ((three_children > two_children) &&
(three_children >= four_or_more)) {
        most_common = "3";
} else {
        most_common = "4 or more";
}
double average = ((double) (total_sum) / T);

System.out.println("Average: " + average + " children to
get at least one of each gender.");
System.out.println("Number of families with 2 children: " +
two_children);
```

```java
            System.out.println("Number of families with 3 children: " +
            three_children);

            System.out.println("Number of families with 4 or more

            children: " + four_or_more);

            System.out.println("The most common number of children

            is " + most_common);
        }
    }
```