```java
public class Divisors {
    public static void main(String[] args) {

        /// Getting a number from the user
        int n = Integer.parseInt(args[0]);

        /// Printing all the divisors of the given number
        for (int i = 1; i <= n; i++) {
            if (n % i == 0) {
                System.out.println(i);
            }
        }
    }
}
```

```
public class Reverse {
	public static void main(String[] args) {

		String s = args[0];
		int Slength = s.length();

		for (int i = Slength - 1; i >= 0; i--) {
			System.out.print(s.charAt(i));
		}
		if (Slength % 2 == 0) {
			System.out.println();
			System.out.println("The middle character is " + s.charAt(Slength / 2 - 1));
		} else {
			System.out.println();
			System.out.println("The middle character is " + s.charAt(Slength / 2));
		}

	}
}
```

```
public class InOrder {
	public static void main(String[] args) {
		// declaring new variables
		int Base = 0;
		int NewRand = 0;

		// generating random numbers and printing them as long as they are in a
		// non-decreasing order.
		while (Base <= NewRand) {
			NewRand = (int) (Math.random() * 10);
			if (NewRand >= Base) {
				System.out.println(NewRand);
				Base = NewRand;
			}
		}
	}
}
```

```
public class DamkaBoard {
	public static void main(String[] args) {
		// getting the size of the board.
		int size = Integer.parseInt(args[0]);

		// printing the board.
		for (int row = 1; row <= size; row++) {
			// printing the current row.
			if (row % 2 == 0) {
				System.out.print(" ");
			}
			for (int col = 1; col <= size; col++) {
				if (col < size) {
					System.out.print("* ");
				} else {
					System.out.print("*");
				}
			}
			if (row % 2 == 1) {
				System.out.print(" ");
			}
			System.out.println();
		}

	}
}
```

```
public class Perfect {
	public static void main(String[] args) {
		// getting a number and declaring a variable for the sum.
		int num = Integer.parseInt(args[0]);
		int sum = 1;

		// checking if the number is perfect and creating a line for the answer.
		String Ans = num + " is a perfect number since " + num + " = 1";
		for (int i = 2; i < num; i++) {
			if (num % i == 0) {
				sum = sum + i;
				Ans += " + " + i;
			}
		}

		// if the number is perfect, print the answer. else, notify that it's not.
		if (sum == num) {
			System.out.println(Ans);
		} else {
			System.out.println(num + " is not a perfect number");
		}
	}
}
```

```java
public class OneOfEachStats {
    public static void main(String[] args) {

        int numFamilies = Integer.parseInt(args[0]);
        double ExpTotal = 0;
        double ExpAvg = 0;
        int child2 = 0;
        int child3 = 0;
        int child4Plus = 0;
        int seed = Integer.parseInt(args[1]);
        Random generator = new Random(seed);

        for (int i = 0; i < numFamilies; i++) {
            boolean b = false;
            boolean g = false;
            int count = 0;
            while (b == false || g == false) {
                // declare a random number either 0 or 1
                int rnd = (int) (generator.nextDouble() * 2);
                count++;
                if (rnd == 0) {
                    b = true;
                } else {
                    g = true;
                }
            }
            if (count == 2) {
                child2++;
            } else {
                if (count == 3) {
                    child3++;
                } else {
                    child4Plus++;
                }
            }

            ExpTotal += count;
        }
        ExpAvg = ExpTotal / numFamilies;

        String max = "";
        if ((child2 > child3) && (child2 > child4Plus)) {
            max = "The most common number of children is 2.";
        } else {
            if (child3 > child4Plus) {
                max = "The most common number of children is 3.";
            } else {
```

```
                max = "The most common number of children is 4 or more.";
            }
        }
        System.out.println("Average: " + ExpAvg + " children to get at least
one of each gender.");
        System.out.println("Number of families with 2 children: " + child2);
        System.out.println("Number of families with 3 children: " + child3);
        System.out.println("Number of families with 4 or more children: " +
child4Plus);
        System.out.println(max);
```