

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

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

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

```

public class Perfect {

    public static void main(String[] args) {

        int n = Integer.parseInt(args[0]);

        int x = 0;

        for ( int i = 1 ; i < n ; i ++ ) {

            if (n % i == 0) {

                x = x + i;
            }
        }

        if (n == x) {

            System.out.print(n + " is a perfect number since " + n + " = 1");

            for ( int i = 2 ; i < n ; i ++ ) {

                if (n % i == 0) {

                    System.out.print(" + " + i);

                }
            }
        } else {

            System.out.println(n + " is not a perfect number");
        }

    }
}

```

```

public class DamkaBoard {

    public static void main(String[] args) {

        int n = Integer.parseInt(args[0]);

        for (int i = 0 ; i < n ; i++) {

            for (int j = 0 ; j < n ; j++) {

                if (i % 2 == 0) {

                    System.out.print("* ");

                } else {

                    System.out.print(" ");

                }

            }

            System.out.println();

        }

    }

}

```

```
import java.util.Random;

public class OneOfEachStats {

    public static void main(String[] args) {

        int T = Integer.parseInt(args[0]);

        int seed = Integer.parseInt(args[1]);

        Random generator = new Random(seed);

        int numberOf;

        int twoChild = 0;

        int threeChild = 0;

        int fourMore = 0;

        double sum = 0;

        for (int i = 0; i < T; i++) {

            numberOf = 1;

            double x;

            double number = generator.nextDouble();

            if (number < 0.5) {

                do {

                    x = generator.nextDouble();

                    sum++;

                    numberOf++;

                } while (x < 0.5);

            } else {

                do {
```

```

        x = generator.nextDouble();

        sum++;

        numberOf++;

    } while (x >= 0.5);
}

if (numberOf == 2) {

    twoChild++;

} else if (numberOf == 3) {

    threeChild++;

} else {

    fourMore++;

}

sum = sum + T;

double average = sum / T;

int max = Math.max(twoChild, Math.max(threeChild, fourMore));

System.out.println("Average: " + average + " children to get at least one of
each gender.");

System.out.println("Number of families with 2 children: " + twoChild);

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

System.out.println("Number of families with 4 or more children: " +
fourMore);

if (max == fourMore) {

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

} else if (max == threeChild) {

    System.out.println("The most common number of children is 3.");

}

```

```
    } else {  
        System.out.println("The most common number of children is 2.");  
    }  
}
```