

```
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 Reverse {
    public static void main (String[] args){
        String s = args[0];
        int n = s.length();
        for(int i = 0; i < n; i++) {
            System.out.print(s.charAt(n-1-i));
        } System.out.println();
        if(n%2 != 0) {
            System.out.println("The middle character is " + s.charAt((n-1)/2));
        } else {
            System.out.println("The middle character is " + s.charAt((n/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 DamkaBoard {
    public static void main(String[] args) {
        int n = Integer.parseInt(args[0]);
        String s1 = "";
        String s2 = "";
        for(int i=0; i<n; i++) {
            s1 = s1 + " * ";
            s2 = s2 + " * ";
        }
        for(int k=0; k<n; k++) {
            if(k%2 == 0) {
                System.out.println(s1);
            } else {
                System.out.println(s2);
            }
        }
    }
}
```

```
public class Perfect {  
    public static void main (String[] args) {  
        int N = Integer.parseInt(args[0]);  
        int sum = 1;  
        String s = N + " is a perfect number since " + N + " = 1";  
        for(int i = 2; i < N; i++) {  
            if(N % i == 0) {  
                s = s + " + " + i;  
                sum = sum + i;  
            }  
        }  
        if (sum == N) {  
            System.out.println(s);  
        } else {  
            System.out.println(N + " 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 seed = Integer.parseInt(args[1]);
        // Initailizes a random numbers generator with the given seed value
        Random generator = new Random(seed);
        int T = Integer.parseInt(args[0]);
        int twoChildren = 0;
        int threeChildren = 0;
        int fourOrMoreChildren = 0;
        int totalchildren = 0;
        for(int i=0; i<T; i++) {
            boolean itisaboy = false;
            boolean itisagirl = false;
            int sum = 0;
            while(!itisaboy || !itisagirl) {
                if(generator.nextDouble() < 0.5) {
                    sum++;
                    itisaboy = true;
                } else {
                    sum++;
                    itisagirl = true;
                }
            }
            totalchildren = totalchildren +sum;
            if(sum == 2) {
                twoChildren++;
            } else if(sum == 3) {
                threeChildren++;
            } else {
                fourOrMoreChildren++;
            }
        }
        double average = (double) totalchildren / T;
        int max = Math.max(twoChildren,
Math.max(threeChildren,fourOrMoreChildren));
        String common = "";
        if(max == twoChildren){
            common = "2";
        } else if (max == threeChildren ) {
            common = "3";
        } else {
            common = "4 or more";
        }
        System.out.println();
        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: " +  
fourOrMoreChildren);  
        System.out.println("The most common number of children is " + common  
+ ".");  
    }  
}
```